PHILIPS 42PF9966/12

MODEL

SERVICE MANUAL

Colour television **Chassis**

FTP2.2E

AA

Service Manual SDI plasma panels: 3122 785 14990

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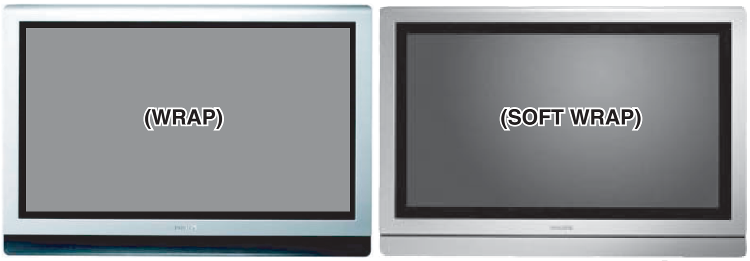

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ServiceManual

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PHILIPS

1. Technical Specifications, Connections, and Chassis Overview

Index of this chapter:

1.1 Technical Specifications
1.2 Connections
1.3 Chassis Overview

Note: Figures below can deviate slightly from the actual situation, due to the different set executions.

1.1 Technical Specifications

1.1.1 Vision

Display type	: Plasma
	: 16:9
Screen size	: 42” (106 cm), 16:9
	: 50” (127 cm), 16:9
Resolution (HxV pixels)	: 42"(low res)852x480p
	: 42" - 1024x1024i
	: 50" - 1366x768p
Contrast ratio	: 42” (low res) - 3000:1
	: 42” / 50” - 1000:1
Light output (cd/m^2)	: 42" - 1000
	: 50" - 900
Viewing angle (HxV degrees)	: 160 x 160
Tuning system	: PLL
Colour systems	: PAL B/G, D/K, I
	: SECAM B/G, D/K, L/L’
Video playback	: NTSC 3.58, 4.43
	: PAL
	: SECAM
	: VGA (640 x 480)
	: SVGA (800 x 600)
	: XVGA (1024 x 768)
	: WXGA (1280 x 768)
Channel selections	: 100 presets
	: UVSH
Aerial input	: 75 ohm, IEC-type

1.1.2 Sound

Sound systems	: AV stereo,
	: FM/FM B/G(5.5-5.74),
	: NICAM B/G(5.5-5.85)
	: NICAM D/K(5.5-5.85),
	: NICAM I (6.0-6.52)
Maximum power	: 2 x 15 W_RMS (int.)

1.1.3 Miscellaneous

Power supply:	
- Mains voltage (V_{AC})	: 220 - 240
- Mains frequency (Hz)	: 50 / 60
Ambient conditions:	
- Temperature range (°C)	: +5 to +40
- Maximum humidity	: 90% R.H.
Power consumption	
- Normal operation (W)	: 42" - ca. 450
	: 50" - ca. 600
- Stand-by (W)	: < 2
Dimensions (WxHxD cm)	: 42" - 109x75x10
	: 50" - 128x88x10
Weight (kg)	: 42" - 42
	: 50" - 58

1.2 Connections

Note: The following connector colour abbreviations are used (acc. to DIN/IEC 757): Bk= Black, Bu= Blue, Gn= Green, Gy= Grey, Rd= Red, Wh= White, and Ye= Yellow.

1.2.1 Side I/O

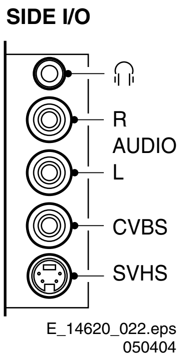

Figure 1-1 Side I/O connections

Mini Jack: Audio Head phone - Out

Bk	- Head phone	32 - 600 ohm / 10 mW

Cinch: Video CVBS - In, Audio - In

Ye	- Video CVBS	1 V_{PP} / 75 ohm
Wh	- Audio L	0.5 V_{RMS} / 10 kohm
Rd	- Audio R	0.5 V_{RMS} / 10 kohm

SVHS (Hosiden): Video Y/C - In

1	- Ground Y	Gnd
2	- Ground C	Gnd
3	- Video Y	1 V_{PP} / 75 ohm
4	- Video C	0.3 V_{PP}P / 75 ohm

1.2.2 Rear Connections

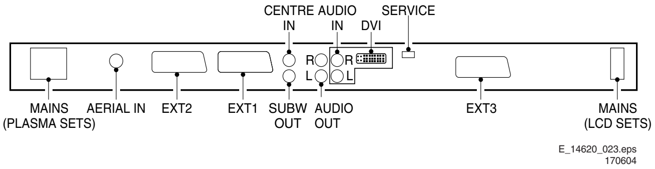

Figure 1-2 Rear connections

Aerial - In

-	- IEC-type (EU)	Coax, 75 ohm

EXT2: Video RGB/YC - In, CVBS - In/Out, Audio - In/Out

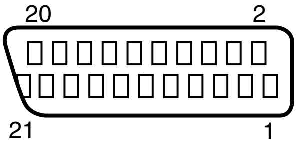

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Figure 1-3 SCART connector

1	- Audio R	0.5 V_{RMS} / 1 kohm	⊖→
2	- Audio R	0.5 V_{RMS} / 10 kohm	→⊖
3	- Audio L	0.5 V_{RMS} / 1 kohm	⊖→
4	- Ground Audio	Gnd	⏚
5	- Ground Blue	Gnd	⏚
6	- Audio L	0.5 V_{RMS} / 10 kohm	→⊖
7	- Video Blue/C-out	0.7 V_{PP} / 75 ohm	→⊖⊖→
8	- Function Select	0 - 2 V: INT 4.5 - 7 V: EXT 16:9 9.5 - 12 V: EXT 4:3	→⊖
9	- Ground Green	Gnd	⏚
10	- Easylink P50	0 - 5 V / 4.7 kohm	→⊖⊖→
11	- Video Green	0.7 V_{PP} / 75 ohm	→⊖
12	- n.c.		
13	- Ground Red	Gnd	⏚
14	- Ground P50	Gnd	⏚
15	- Video Red/C	0.7 V_{PP} / 75 ohm	→⊖
16	- FBL	0 - 0.4 V: INT 1 - 3 V: EXT / 75 ohm	→⊖
17	- Ground Video	Gnd	⏚
18	- Ground FBL	Gnd	⏚
19	- Video CVBS	1 V_{PP} / 75 ohm	⊖→
20	- Video CVBS/Y	1 V_{PP} / 75 ohm	→⊖
21	- Shield	Gnd	⏚

EXT1: Video RGB/CVBS - In, Audio - In

1	- n.c.		
2	- Audio R	0.5 V_{RMS} / 10 kohm	→⊖
3	- n.c.		
4	- Ground Audio	Gnd	⏚
5	- Ground Blue	Gnd	⏚
6	- Audio L	0.5 V_{RMS} / 10 kohm	→⊖
7	- Video Blue	0.7 V_{PP} / 75 ohm	→⊖
8	- Function Select	0 - 2 V: INT 4.5 - 7 V: EXT 16:9 9.5 - 12 V: EXT 4:3	→⊖
9	- Ground Green	Gnd	⏚
10	- n.c.		
11	- Video Green	0.7 V_{PP} / 75 ohm	→⊖
12	- n.c.		
13	- Ground Red	Gnd	⏚
14	- Ground Data	Gnd	⏚
15	- Video Red	0.7 V_{PP} / 75 ohm	→⊖
16	- FBL	0 - 0.4 V: INT 1 - 3 V: EXT / 75 ohm	→⊖
17	- Ground Video	Gnd	⏚
18	- Ground FBL	Gnd	⏚
19	- n.c.		
20	- Video CVBS	1 V_{PP} / 75 ohm	→⊖
21	- Shield	Gnd	⏚

Cinch: Sub woofer - Out, Centre - In

Bu	- Centre	0.5 V_{RMS} / 10 kohm	→⊖◎
Bk	- Sub woofer	0.5 V_{RMS} / 10 kohm	⊖→◎

Cinch: Audio - Out

Rd	- Audio - R	0.5 V_{RMS} / 10 kohm	⊖→◎
Wh	- Audio - L	0.5 V_{RMS} / 10 kohm	⊖→◎

Cinch: DVI Audio - In

Rd	- Audio - R	0.5 V_{RMS} / 10 kohm	→⊖◎
Wh	- Audio - L	0.5 V_{RMS} / 10 kohm	→⊖◎

DVI-I: Digital/Analogue Video - In

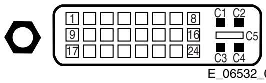

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Figure 1-4 DVI-I connector

1	- D2-		→⊖
2	- D2+		→⊖
3	- Shield	Gnd	⏚
4	- D4-		→⊖
5	- D4+		→⊖
6	- DDC_SCL	DDC clock	⊖→
7	- DDC_SDA	DDC data	→⊖⊖→
8	- V-sync	0 - 5 V	→⊖
9	- D1-		→⊖
10	- D1+		→⊖
11	- Shield	Gnd	⏚
12	- D3-		→⊖
13	- D3+		→⊖
14	- +5V		→⊖
15	- Ground	Gnd	⏚
16	- HPD	Hot Plug Detect	→⊖
17	- D0-		→⊖
18	- D0+		→⊖
19	- Shield	Gnd	⏚
20	- D5-		→⊖
21	- D5+		→⊖
22	- Shield	Gnd	⏚
23	- CLK+		→⊖
24	- CLK-		→⊖
C1	- Video Red	0.7 V_{PP} / 75 ohm	→⊖
C2	- Video Green	0.7 V_{PP} / 75 ohm	→⊖
C3	- Video Blue	0.7 V_{PP} / 75 ohm	→⊖
C4	- H-sync	0 - 5 V	→⊖
C5	- Ground	Gnd	⏚

Service connector (ComPair)

1	- SDA-S	I^2C Data (0 - 5 V)	→⊖⊖→
2	- SCL-S	I^2C Clock (0 - 5 V)	→⊖
3	- Ground	Gnd	⏚

EXT3: Video RGB/CVBS - In, Audio - In

1	- n.c.		
2	- Audio R	0.5 V_{RMS} / 10 kohm	→⊖
3	- n.c.		
4	- Ground Audio	Gnd	⏚
5	- Ground Blue	Gnd	⏚
6	- Audio L	0.5 V_{RMS} / 10 kohm	→⊖
7	- Video Blue	0.7 V_{PP} / 75 ohm	→⊖
8	- Function Select	0 - 2 V: INT 4.5 - 7 V: EXT 16:9 9.5 - 12 V: EXT 4:3	→⊖
9	- Ground Green	Gnd	⏚
10	- n.c.		
11	- Video Green	0.7 V_{PP} / 75 ohm	→⊖
12	- n.c.		
13	- Ground Red	Gnd	⏚
14	- Ground Data	Gnd	⏚
15	- Video Red	0.7 V_{PP} / 75 ohm	→⊖
16	- FBL	0 - 0.4 V: INT 1 - 3 V: EXT / 75 ohm	→⊖
17	- Ground Video	Gnd	⏚
18	- Ground FBL	Gnd	⏚
19	- n.c.		
20	- Video CVBS	1 V_{PP} / 75 ohm	→⊖
21	- Shield	Gnd	⏚

1.3 Chassis Overview

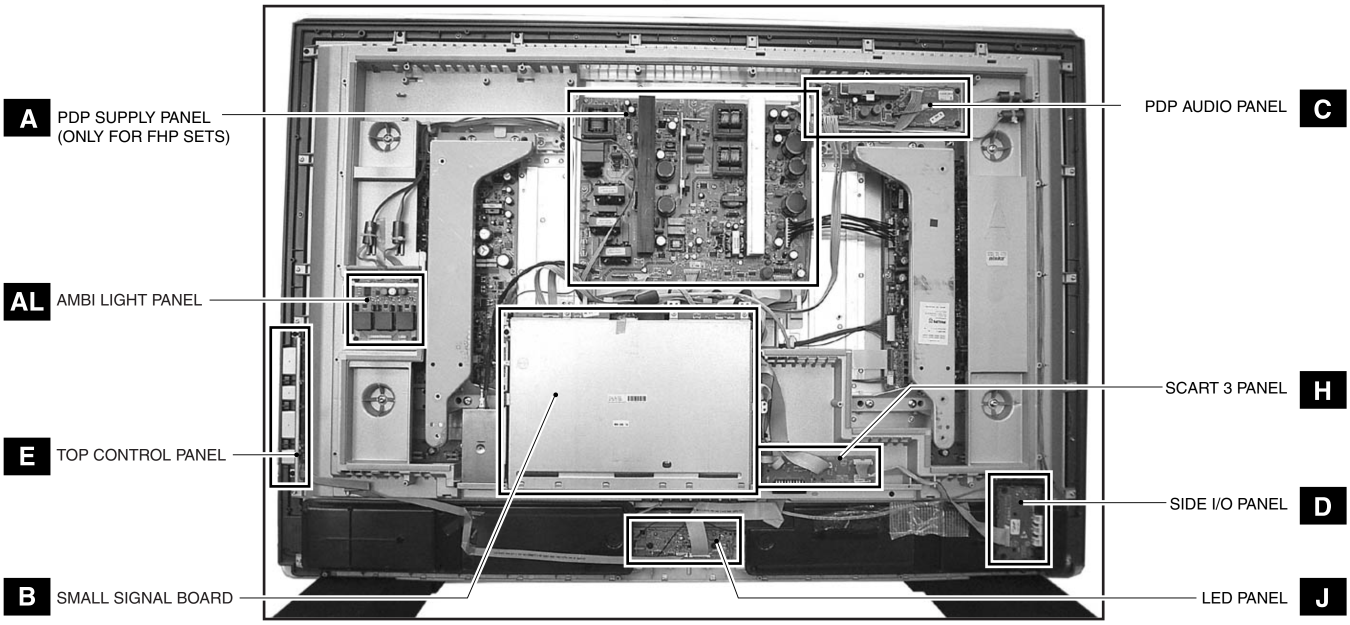
A PDP SUPPLY PANEL (ONLY FOR FHP SETS)
AL AMBI LIGHT PANEL
E TOP CONTROL PANEL
B SMALL SIGNAL BOARD
PDP AUDIO PANEL C
SCART 3 PANEL H
SIDE I/O PANEL D
LED PANEL J

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Figure 1-5 PWB location

2. Safety Instructions, Warnings, and Notes

Index of this chapter:
2.1 Safety Instructions
2.2 Warnings
2.3 Notes

2.1 Safety Instructions

Safety regulations require the following **during** a repair:
- Connect the set to the Mains (AC Power) via an isolation transformer (> 800 VA).
- Replace safety components, indicated by the symbol ⚠, only by components identical to the original ones. Any other component substitution (other than original type) may increase risk of fire or electrical shock hazard.

Safety regulations require that **after** a repair, the set must be returned in its original condition. Pay in particular attention to the following points:
- Route the wire trees correctly and fix them with the mounted cable clamps.
- Check the insulation of the Mains (AC Power) lead for external damage.
- Check the strain relief of the Mains (AC Power) cord for proper function.
- Check the electrical DC resistance between the Mains (AC Power) plug and the secondary side (only for sets that have a Mains (AC Power) isolated power supply):
  1. Unplug the Mains (AC Power) cord and connect a wire between the two pins of the Mains (AC Power) plug.
  2. Set the Mains (AC Power) switch to the "on" position (keep the Mains (AC Power) cord unplugged!).
  3. Measure the resistance value between the pins of the Mains (AC Power) plug and the metal shielding of the tuner or the aerial connection on the set. The reading should be between 4.5 Mohm and 12 Mohm.
  4. Switch "off" the set, and remove the wire between the two pins of the Mains (AC Power) plug.
- Check the cabinet for defects, to prevent touching of any inner parts by the customer.

2.2 Warnings

- All ICs and many other semiconductors are susceptible to electrostatic discharges (ESD ⚠). Careless handling during repair can reduce life drastically. Make sure that, during repair, you are connected with the same potential as the mass of the set by a wristband with resistance. Keep components and tools also at this same potential. Available ESD protection equipment:
  - Complete kit ESD3 (small tablemat, wristband, connection box, extension cable and earth cable) 4822 310 10671.
  - Wristband tester 4822 344 13999.
- Be careful during measurements in the high voltage section.
- Never replace modules or other components while the unit is switched "on".
- When you align the set, use plastic rather than metal tools. This will prevent any short circuits and the danger of a circuit becoming unstable.

2.3 Notes

2.3.1 General

- Measure the voltages and waveforms with regard to the chassis (= tuner) ground (⏚), or hot ground (⏚), depending on the tested area of circuitry. The voltages and waveforms shown in the diagrams are indicative. Measure them in the Service Default Mode (see chapter 5) with a colour bar signal and stereo sound (L: 3 kHz, R: 1 kHz unless stated otherwise) and picture carrier at 475.25 MHz for PAL, or 61.25 MHz for NTSC (channel 3).
- Where necessary, measure the waveforms and voltages with (⫪) and without (⫫) aerial signal. Measure the voltages in the power supply section both in normal operation (Ⓘ) and in stand-by (⏻). These values are indicated by means of the appropriate symbols.
- The semiconductors indicated in the circuit diagram and in the parts lists, are interchangeable per position with the semiconductors in the unit, irrespective of the type indication on these semiconductors.
- Manufactured under license from Dolby Laboratories. “Dolby”, “Pro Logic” and the “double-D symbol”, are trademarks of Dolby Laboratories.

2.3.2 Schematic Notes

- All resistor values are in ohms, and the value multiplier is often used to indicate the decimal point location (e.g. 2K2 indicates 2.2 kohm).
- Resistor values with no multiplier may be indicated with either an "E" or an "R" (e.g. 220E or 220R indicates 220 ohm).
- All capacitor values are given in micro-farads (μ= x10^{-6}), nano-farads (n= x10^{-9}), or pico-farads (p= x10^{-12}).
- Capacitor values may also use the value multiplier as the decimal point indication (e.g. 2p2 indicates 2.2 pF).
- An "asterisk" (*) indicates component usage varies. Refer to the diversity tables for the correct values.
- The correct component values are listed in the Spare Parts List. Therefore, always check this list when there is any doubt.

2.3.3 Rework on BGA (Ball Grid Array) ICs

General
Although (LF)BGA assembly yields are very high, there may still be a requirement for component rework. By rework, we mean the process of removing the component from the PWB and replacing it with a new component. If an (LF)BGA is removed from a PWB, the solder balls of the component are deformed drastically so the removed (LF)BGA has to be discarded.

Device Removal
As is the case with any component that, is being removed, it is essential when removing an (LF)BGA, that the board, tracks, solder lands, or surrounding components are not damaged. To remove an (LF)BGA, the board must be uniformly heated to a temperature close to the reflow soldering temperature. A uniform temperature reduces the risk of warping the PWB.
To do this, we recommend that the board is heated until it is certain that all the joints are molten. Then carefully pull the component off the board with a vacuum nozzle. For the appropriate temperature profiles, see the IC data sheet.

Area Preparation
When the component has been removed, the vacant IC area must be cleaned before replacing the (LF)BGA.
Removing an IC often leaves varying amounts of solder on the mounting lands. This excessive solder can be removed with either a solder sucker or solder wick. The remaining flux can be removed with a brush and cleaning agent.
After the board is properly cleaned and inspected, apply flux on the solder lands and on the connection balls of the (LF)BGA.
Note: Do not apply solder paste, as this has been shown to result in problems during re-soldering.

Device Replacement

The last step in the repair process is to solder the new component on the board. Ideally, the (LF)BGA should be aligned under a microscope or magnifying glass. If this is not possible, try to align the (LF)BGA with any board markers. So as not to damage neighbouring components, it may be necessary to reduce some temperatures and times.

More Information

For more information on how to handle BGA devices, visit this URL: *www.atyourservice.ce.philips.com* (needs subscription, not available for all regions). After login, select “Magazine”, then go to “Workshop Information”. Here you will find Information on how to deal with BGA-ICs.

2.3.4 Lead-free Solder

Philips CE is producing lead-free sets (PBF) from 1.1.2005 onwards.

Identification: The bottom line of a type plate gives a 14-digit serial number. Digits 5 and 6 refer to the production year, digits 7 and 8 refer to production week (in example below it is 1991 week 18).

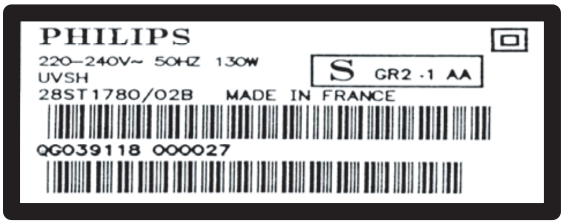

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Figure 2-1 Serial number example

Regardless of the special lead-free logo (which is not always indicated), one must treat all sets from this date onwards according to the rules as described below.

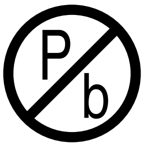

Figure 2-2 Lead-free logo

Due to lead-free technology some rules have to be respected by the workshop during a repair:

- Use only lead-free soldering tin Philips SAC305 with order code 0622 149 00106. If lead-free solder paste is required, please contact the manufacturer of your soldering equipment. In general, use of solder paste within workshops should be avoided because paste is not easy to store and to handle.
- Use only adequate solder tools applicable for lead-free soldering tin. The solder tool must be able:
  - To reach a solder-tip temperature of at least 400°C.
  - To stabilise the adjusted temperature at the solder-tip.
  - To exchange solder-tips for different applications.
- Adjust your solder tool so that a temperature of around 360°C - 380°C is reached and stabilised at the solder joint. Heating time of the solder-joint should not exceed ~ 4 sec. Avoid temperatures above 400°C, otherwise wear-out of tips will increase drastically and flux-fluid will be destroyed. To avoid wear-out of tips, switch “off” unused equipment or reduce heat.
- Mix of lead-free soldering tin/parts with leaded soldering tin/parts is possible but PHILIPS recommends strongly **to avoid** mixed regimes. If this cannot be avoided, carefully clear the solder-joint from old tin and re-solder with new tin.
- Use only original spare-parts listed in the Service-Manuals. Not listed standard material (commodities) has to be purchased at external companies.
- Special information for lead-free BGA ICs: these ICs will be delivered in so-called "dry-packaging" to protect the IC against moisture. This packaging may only be opened shortly before it is used (soldered). Otherwise the body of the IC gets "wet" inside and during the heating time the structure of the IC will be destroyed due to high (steam-) pressure inside the body. If the packaging was opened before usage, the IC has to be heated up for some hours (around 90°C) for drying (think of ESD-protection!).
  Do not re-use BGAs at all!
- For sets produced before 1.1.2005, containing leaded soldering tin and components, all needed spare parts will be available till the end of the service period. For the repair of such sets nothing changes.

In case of doubt whether the board is lead-free or not (or with mixed technologies), you can use the following method:

- Always use the highest temperature to solder, when using SAC305 (see also instructions below).
- De-solder thoroughly (clean solder joints to avoid the mixing of two alloys).

Caution: For BGA-ICs, you **must** use the correct temperature profile, which is coupled to the 12NC. For an overview of these profiles, visit the website *www.atyourservice.ce.philips.com* (needs subscription, but is not available for all regions).
You will find this and more technical information within the "Magazine", chapter "Workshop information".
For additional questions please contact your local repair help desk.

2.3.5 Practical Service Precautions

- **It makes sense to avoid exposure to electrical shock.** While some sources are expected to have a possible dangerous impact, others of quite high potential are of limited current and are sometimes held in less regard.
- **Always respect voltages**. While some may not be dangerous in themselves, they can cause unexpected reactions that are best avoided. Before reaching into a powered TV set, it is best to test the high voltage insulation. It is easy to do, and is a good service precaution.

3. Directions for Use

You can download this information from the following websites:
http://www.philips.com/support
http://www.p4c.philips.com

4. Mechanical Instructions

Index of this chapter:

4.1 Cable Dressing
4.2 Service Position
4.3 Assy/PWB Removal
4.4 Plasma Panel / Glass Plate (Dis)Assembly
4.5 Set Re-assembly

Notes:

- Figures below can deviate slightly from the actual situation, due to the different set executions.
- Follow the disassemble instructions in described order.
- Be aware that the internal (gold coloured) frame is made of conducting material. So, be cautious during electrical measurements!

4.1 Cable Dressing

4.1.1 Chassis

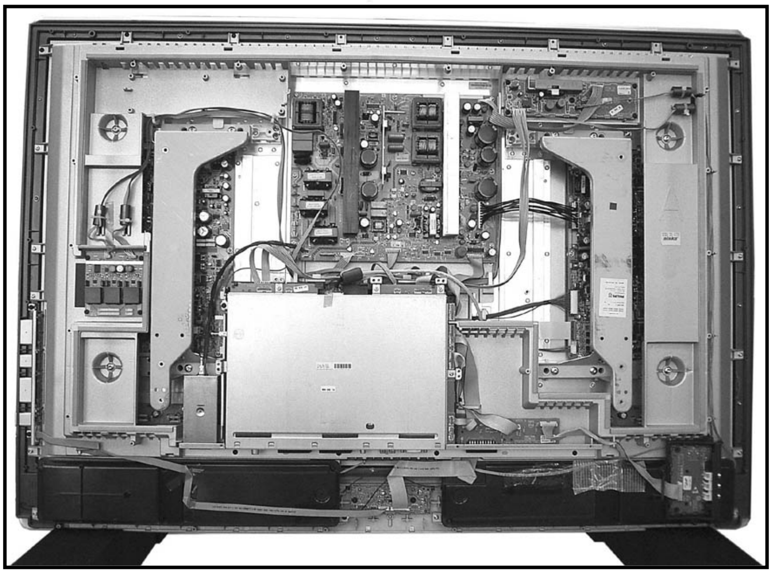

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Figure 4-1 Chassis cable dressing

4.2 Service Position

For easy servicing of this set, there are a few possibilities created:

- The buffers from the packaging (see figure "Rear cover").
- Foam bars (created for service).
- Aluminium service stands (created for service).

4.2.1 Foam Bars

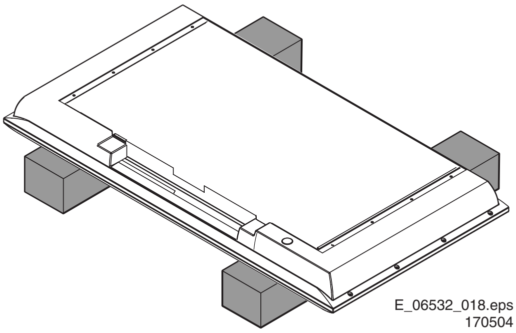

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Figure 4-2 Foam bars

The foam bars (order code 3122 785 90580 for two pieces) can be used for all types and sizes of Flat TVs. By laying the TV face down on the (ESD protective) foam bars, a stable situation is created to perform measurements and alignments.
By placing a mirror under the TV, you can monitor the screen.

4.2.2 Aluminium Stands

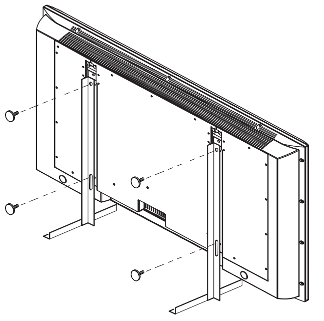

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Figure 4-3 Aluminium stands (MkI)

The new (MkII) aluminium stands (order code 3122 785 90690) can also be used to do measurements, alignments, and duration tests. The stands can be (dis)mounted quick and easy by means of sliding them in/out the "mushrooms".
Important: For (older) FTV sets without these "mushrooms", it is obligatory to use the provided screws, otherwise it is possible to damage the monitor inside!.

4.3 Assy/PWB Removal

4.3.1 Metal Back Plate

Caution: Disconnect the mains power cord before you remove the metal back plate.

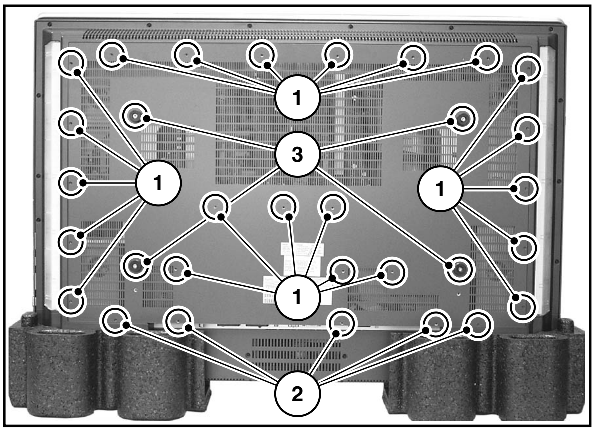

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Figure 4-4 Metal back plate

1. Place the TV set upside down on a table top, using the foam bars (see part "Foam Bars").
   Caution: do **not** put pressure on the display, but let the monitor lean on the speakers or the Front cover.
2. Remove all T10 parker screws (1) from the top, centre, and left and right sides of the back plate.
3. Remove all T10 tapping screws (2) from the bottom of the back plate.
4. Remove the four "mushrooms" (3) from the back plate.
5. Lift the back plate from the set. Make sure that wires and flat foils are not damaged during the back plate removal.

4.3.2 Rear Cover

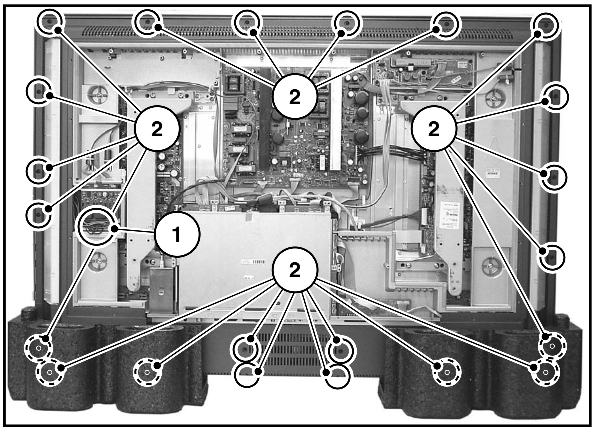

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Figure 4-5 Rear cover

1. Disconnect all four connectors (1) at the Ambient Light Inverter that go to the Ambient Lights in the rear cover.
2. Remove all T10 tapping screws (2) around the edges of the rear cover.
3. Lift the rear cover from the set.

4.3.3 Ambient Light Panel

1. Disconnect all cables from the Ambient Light Inverter panel.
2. Remove all mounting screws from the Ambient Light Inverter panel.
3. Take out the Ambient Light Inverter panel.

4.3.4 Power Supply Panel

1. Disconnect all cables from the Power Supply panel.
2. Remove all mounting screws from the Power Supply panel.
3. Take out the Power Supply panel.

4.3.5 SCART3 Panel

1. Disconnect all cables from the SCART3 panel.
2. Remove the two mounting screws (7) near the SCART3 at the connector plate (see figure "Connector plate").
3. Take out the SCART3 panel.

4.3.6 Audio Panel

1. Disconnect all cables from the Audio panel.
2. Remove all mounting screws from the Audio panel.
3. Take out the Audio panel.

4.3.7 Side I/O Panel

1. Disconnect the cable from the Side I/O panel.
2. Release the clamps and take out the Side I/O panel from its bracket.

4.3.8 Top / Side Control

1. Remove the mounting screws from the Top / Side Control panel bracket.
2. Disconnect the cable.
3. Release the clamps and take out the Top / Side Control panel.

4.3.9 LED Panel

1. Disconnect all cables from the LED panel.
2. Remove the mounting screws from the LED panel.
3. Take out the LED panel.

4.3.10 Speakers

1. Remove all mounting screws.
2. After removing the cover plate, you can access the speakers.
3. Be sure that the foam that makes the unit airtight is not damaged.

4.3.11 SSB

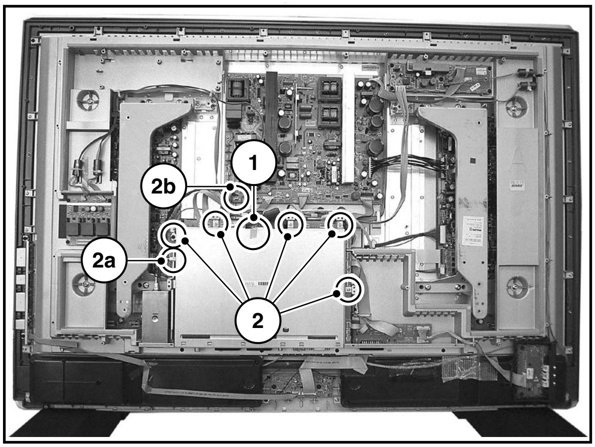

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Figure 4-6 SSB top shielding

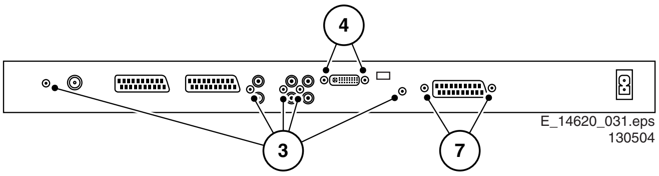

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Figure 4-7 Connector plate

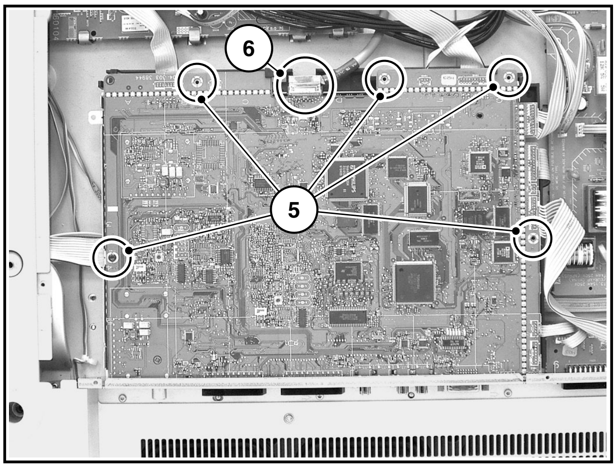

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Figure 4-8 SSB (photo from FTL2.x)

1. Remove the LVDS fixing tape (1).
2. Remove all fixing screws (2).
3. Disconnect the grounding wire from the mains filter (2a).
4. Shift, and lift the shielding at the top. The panel hinges at the SCART side.
   Caution: do **not** damage the EMC shielding foam while you remove the shielding.
5. Remove mounting screws (3) from the connector plate. Use a 5 mm socket screwdriver to remove both DVI connector distance bolts (4).
6. Remove the mounting screws from the SSB (5).
7. Disconnect the LVDS cable (6).
8. Lift the SSB, disconnect all cables, and take out the SSB.

4.3.12 Ambient Lights

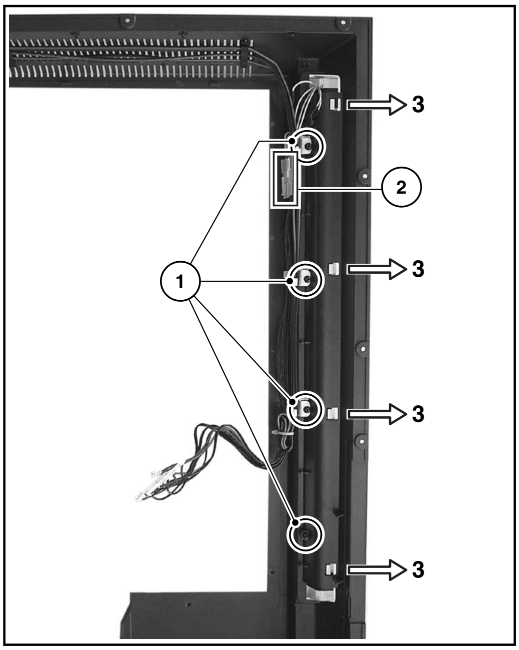

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Figure 4-9 Ambient light

Ambient lights are located in the rear cover of the set.

1. Remove all mounting Ambient Light screws (1).
2. Unplug the connectors (mounted with double-sided tape) (2).
3. Shift the Ambient light unit to the side (3) and take out the unit.

4.4 Plasma Panel / Glass Plate (Dis)Assembly

Important: Be sure to work in a dust free environment during the following activities. In addition, the use of (fabric) hand gloves is advised.

4.4.1 Plasma Display Panel

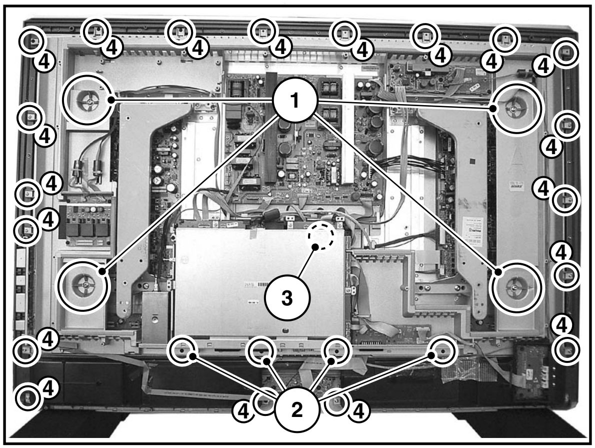

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Figure 4-10 Plasma panel removal (photo from 42” FHP)

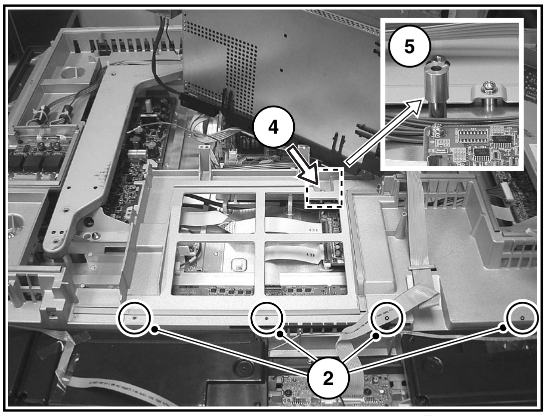

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Figure 4-11 Hidden screw

Disassembly

1. Place the TV set face down on the foam bars. Place the bars at the edges of the set so they will support the front frame, and not only the glass plate!
2. Remove the four T25 screws (1) that hold the plasma panel.
   Note: In some models, the upper left T25 screw is hidden under the Ambient Light Inverter panel. Remove this panel to get access to it.
3. Remove the fifth T25 screw that is located near the SSB.
   Note: In some models, this fifth screw is hidden under the SSB. To get access, you have to remove the four T10 screws (2) that mount the "SSB connector plate" to the frame. Then, lift the complete SSB unit away, so you can remove the hidden screw (4).
4. Remove all T10 tapping screws around the frame (4).
5. Next step is to unplug the following connectors (see also Wiring Diagram in chapter 6):
   - Mains plug on PSU.
   - Audio panel supply plug on PSU.
   - LVDS plug on SSB.
   - Ambilight supply plug on PSU.
   - SSB supply plugs on PSU.
   - Side/Top Control plug on LED panel.
   - Side I/O plug on LED panel.
   - SSB grounding wire.
6. Lift the plastic frame together with all PWBs from the PDP panel.
7. Now the PDP (incl. the PSU panel) can be removed. Lift the panel at the two metal bars from the glass plate.
8. Before sending the plasma panel to the NSO for repair or exchange, remove the PSU panel and the spacer (5) that is placed upon the centre mounting stud.

Assembly

In order to centre the (new) plasma panel correctly w.r.t. the glass plate, do the following:

1. Place the (new) plasma panel face down on foam bars.
2. Also, place the front assy (front panel with glass plate) on two other foam bars.
3. Mount the plastic frame on the plasma panel.
   Important: Be sure that the spacer (order code 3104 301 62781) is placed upon the centre mounting stud (5).
4. Lift this module (frame and PDP) and place it into the front assy.
5. Now follow the above described disassembly process in reverse order.

4.4.2 Glass Plate

1. Follow the above-described PDP disassembly instructions.
2. After removing the PDP, the glass plate is now accessible.

4.5 Set Re-assembly

To re-assemble the whole set, execute all processes in reverse order.

Note: While re-assembling the set, make sure that:
- All cables are placed and connected in their original position (see figure “Cable dressing”).
- EMC Shielding foam is intact.
- LVDS connector (SSB) is secured with tape.
- Metal shielding strip at the Ambilight Inverters is in place.
- All "grounding" wires are re-connected:
  - Between metal speaker grid and frame (near the LED panel).
  - Between the Mains Filter and the SSB Top Shielding (see figure SSB Top shielding item 2a).
  - Between the SSB Top Shielding and the PSU (see figure SSB Top shielding item 2b).

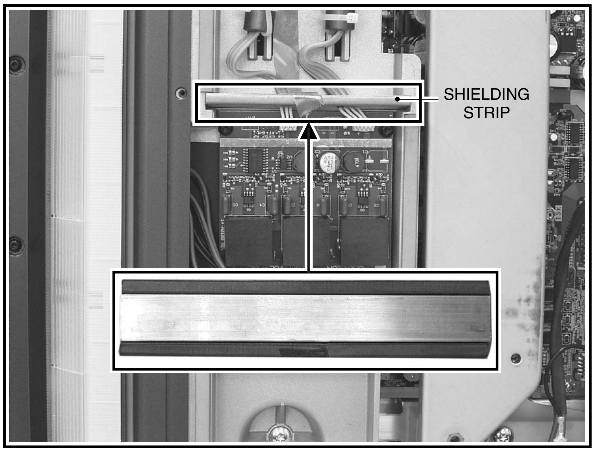

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Figure 4-12 Metal shielding strip at the Ambilight Inverter

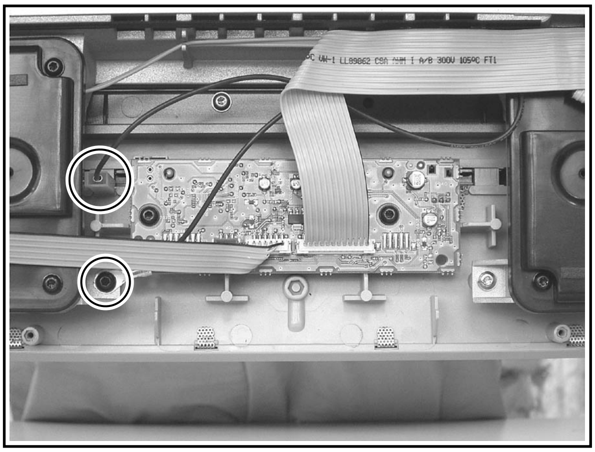

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Figure 4-13 Grounding wire of metal speaker grid

5. Service Modes, Error Codes, and Fault Finding

Index of this chapter:

5.1 Test Points
5.2 Service Modes
5.3 Problems and Solving Tips (related to CSM)
5.4 ComPair
5.5 Error Codes
5.6 The Blinking LED Procedure
5.7 Protections
5.8 Repair tips
5.9 Software Downloading

5.1 Test Points

The chassis is equipped with test points printed on the circuit board assemblies.

Perform measurements under the following conditions:
- Service Default Mode.
- Video: colour bar signal.
- Audio: 3 kHz left, 1 kHz right.

5.2 Service Modes

Service Default Mode (SDM) and Service Alignment Mode (SAM) offer several features for the service technician, while the Customer Service Mode (CSM) is used for communication between a Philips Customer Care Centre (P3C) and a customer.

There is also the option of using ComPair, a hardware interface between a computer (see requirements below) and the TV chassis. It offers the ability of structured troubleshooting, test pattern generation, error code reading, software version read-out, and software upgrading.
Minimum requirements: a Pentium processor, Windows 95/98, and a CD-ROM drive (see also paragraph “ComPair”).

5.2.1 Service Default Mode (SDM)

Purpose
- To create a pre-defined setting, to get the same measurement results as given in this manual.
- To override SW protections.
- To start the blinking LED procedure.

Specifications
- Tuning frequency: 475.25 MHz for PAL/SECAM.
- Colour system: SECAM L for France or PAL B/G for the rest of Europe.
- All picture settings at 50% (brightness, colour, contrast).
- All sound settings at 50%, except volume at 25%.
- All service-unfriendly modes (if present) are disabled, like:
  - (Sleep) timer.
  - Child/parental lock.
  - Blue mute.
  - Automatic volume limiter (AVL).
  - Auto switch-off (when no video signal was received for 10 minutes).
  - Skip/blank of non-favourite pre-sets.
  - Smart modes.
  - Auto store of personal presets.
  - Auto user menu time-out.

How to activate SDM
Use one of the following methods:
- Use the standard RC-transmitter and key in the code **“062596”**, directly followed by the “MENU” button.

Note: It is possible that, together with the SDM, the main menu will appear. To switch it off, push the “MENU” button again.

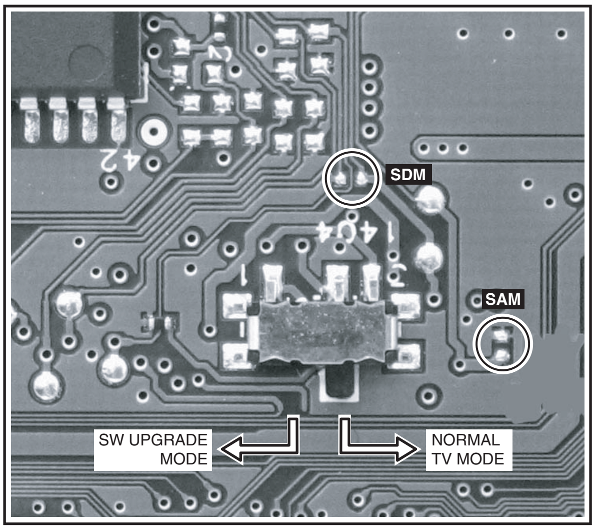

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Figure 5-1 Service pads

- Short for a moment the two solder pads on the SSB, with the indication “SDM”. Activation can be performed in all modes, except when the set has a problem with the main microprocessor.
  Caution: If the SDM is activated via the pins, all the software-controlled protections are de-activated.
- Use the DST-emulation feature of ComPair.
- Use the “DEFAULT” button on the Dealer Service Tool (RC7150).

How to navigate
When you press the “MENU” button on the RC transmitter, the set will toggle between the SDM and the normal user menu (with the SDM mode still active in the background).

How to exit SDM
Use one of the following methods:
- Switch the set to STANDBY via the RC-transmitter.
- Press the “EXIT” button on the DST.
- Via a standard customer RC-transmitter: key in “00”-sequence.

5.2.2 Service Alignment Mode (SAM)

Purpose
- To perform (software) alignments.
- To change option settings.
- To easily identify the used software version.
- To view operation hours.
- To display (or clear) the error code buffer.

Specifications
- Operation hours counter.
- Software version.
- Option settings.
- Error buffer reading and erasing.
- Software alignments.

How to activate SAM
Use one of the following methods:
- Via a standard RC transmitter: key in the code **“062596”** directly followed by the “OSD [i+]” button. After activating

SAM with this method a service warning will appear on the screen, you can continue by pressing any digit key on the RC.

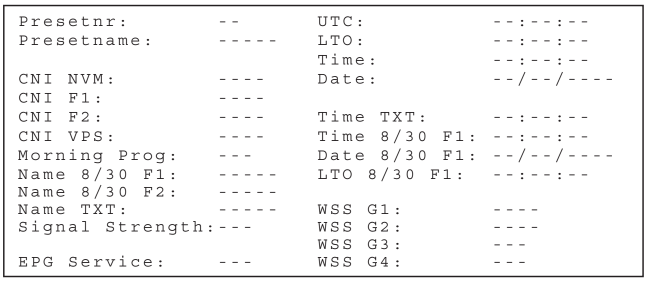
- Short for a moment the two solder pads on the SSB with the indication "SAM". Depending on the software version, it is possible that a service warning will appear. You can continue by pressing any digit key on the RC.
- Use the DST-emulation feature of ComPair.
- Press the ALIGN button on the DST while the set is in the normal operation

After activating this mode, “SAM” will appear in the upper right corner of the screen.

Contents of SAM:

- **OPERATION HOURS.** Displays the accumulated total of operation hours (not the stand-by hours).
- **HARDWARE INFO.**
  - **ROM VERSION.** Displays the date of the software and the software version of the ROM
    Example: TX21EU_1.0_01234 = AAAABB_X.Y_NNNNN.
    - **AAAA**= the chassis name.
    - **BB**= the region: EU= Europe, AP= Asia Pacific PAL/Multi, AN= Asia Pacific NTSC, US= USA, LT= LATAM.
    - **X.Y**= the software version, where X is the main version number (different numbers are not compatible with one another) and Y is the sub version number (a higher number is always compatible with a lower number).
    - **NNNNN**= last five digits of 12nc code software.
  - **FBX Version.** Displays the software version of the FBX
  - **SW VERSION EPLD**. Displays the software version of the EPLD.
- **ERRORS.** (followed by maximal 10 errors). The most recent error is displayed at the upper left (for an error explanation see paragraph “Error Codes”).
- **DEFECTIVE MODULE.** Here the module that generates the error is displayed. If there are multiple errors in the buffer, which are not all generated by a single module, there is probably another defect. It will then display the message “UNKNOWN” here.
- **RESET ERROR BUFFER.** When you press the “OK” button, the error buffer is reset.
- **ALIGNMENTS.** This will activate the “ALIGNMENTS” sub-menu.
- **DEALER OPTIONS.** Extra features for the dealers.
- **SERVICE OPTIONS.** Extra features for Service.
- **INITIALISE NVM.** When an NVM was corrupted (or replaced) in the former EM3 chassis, the microprocessor replaces the content with default data (to assure that the set can operate). However, all pre-sets and alignment values are gone now, and option numbers are not correct. Therefore, this was a very drastic way. In this chassis, the procedure is implemented in another way: The moment the processor recognises a corrupted NVM, the “initialise NVM” line will be highlighted. Now, you can do two things (dependent of the service instructions at that moment):
  - Save the content of the NVM via ComPair for development analysis, **before** initialising. This will give the Philips Service department an extra possibility for diagnosis (e.g. when Development asks for this).
  - Initialise the NVM (same as in the past, however now it happens conscious).
- **STORE.** All options and alignments are stored when pressing the “OK”-button
- **FUNCTIONAL TEST.** All devices are tested via the “OK” button. Eventual errors are displayed in the error buffer. The error buffer is not erased, the content returns when this test is terminated.
- **DAILY MENUS.** With the “OK” button, you can go to the normal user menu. SAM is still active in the background. With the “MENU” button, you return from the user menu to SAM menu. This feature can be helpful to quickly change some settings in the user menu.
- **SW MAINTENANCE.**
  - **UPGRADE.** More info see paragraph Software downloading.
  - **EVENTS.** Not useful for service purposes. In case of specific software problems, the development department can ask for this info.
  - **BDM INFO.** Broadcast Debug Menu info. The purpose of this menu is to debug the broadcast, **not** the TV. The menu gives an overview of what is received on the current preset.

Following items are displayed:



```
Presetnr:       --      UTC:          --:--:--
Presetname:     -----   LTO:          --:--:--
                        Time:         --:--:--
CNI NVM:        ----    Date:         --/--/----
CNI F1:         ----
CNI F2:         ----    Time TXT:     --:--:--
CNI VPS:        ----    Time 8/30 F1: --:--:--
Morning Prog:   ---     Date 8/30 F1: --/--/----
Name 8/30 F1:   -----   LTO 8/30 F1:  --:--:--
Name 8/30 F2:   -----
Name TXT:       -----   WSS G1:       ----
Signal Strength:---     WSS G2:       ----
                        WSS G3:       ---
EPG Service:    ---     WSS G4:       ---
```

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Figure 5-2 Broadcast debug menu overview

Table 5-1 Broadcast debug menu explanation

Item	Source	Description
Presetnr	Set	Preset number of the current selected preset.
Presetname	Set	Preset name of the current selected preset.
CNI NVM	Broadcaster	CNI number stored in NVM for the current preset.
CNI F1	Broadcaster	CNI number from transmitted Packet 8/30 Format 1.
CNI F2	Broadcaster	CNI number from transmitted Packet 8/30 Format 2.
CNI VPS	Broadcaster	CNI number from transmitted VPS line.
Morning Prog	Broadcaster	"ARD" or "ZDF" according to dedicated bit in 8/30 Format 1.
Name 8/30 F1	Broadcaster	Name extracted from status message of 8/30 Format 1.
Name 8/30 F2	Broadcaster	Name extracted from status message of 8/30 Format 2.
Name TXT	Broadcaster	Name extracted from TXT header.
Signal Strength	FBX	Noise figure measured for selected preset.
EPG Service	Set	EPG Service stored in NVM for current preset displayed as "TXT", "MCP", "SCP", "OCP".
UTC	Set	UTC (Universal Time Code formerly known as Greenwich Mean Time) used in the set.
LTO	Set	LTO (Local Time Offset) used in the set. Used by EPG for all NextView displays. (= Time TXT header - Time 8/30 F1)
Time	Set	Current time running in the set. Was extracted at start-up, then maintained by software.
Date	Set	Current date running in the set. Was extracted at start-up, then maintained by software.
Time TXT	Broadcaster	TXT header time from the selected preset.
Time 8/30 F1	Broadcaster	UTC time from 8/30 Format 1.
Date 8/30 F1	Broadcaster	Date from 8/30 Format 1.
LTO 8/30 F1	Broadcaster	LTO from 8/30 Format 1.
WSS G1	Broadcaster	WSS Group 1 (Aspect Ratio) bits 0 1 2 3
WSS G2	Broadcaster	WSS Group 2 (Enhanced Services) bits 4 5 6 7
WSS G3	Broadcaster	WSS Group 3 (Subtitles) bits 8 9 10
WSS G4	Broadcaster	WSS Group 4 (Reserved) bits 11 12 13

How to navigate

- In SAM, you can select the menu items with the “CURSOR UP/DOWN” key on the RC-transmitter. The selected item will be highlighted. When not all menu items fit on the screen, move the “CURSOR UP/DOWN” key to display the next/previous menu items.

- With the “CURSOR LEFT/RIGHT” keys, it is possible to:
  - (De) activate the selected menu item.
  - Change the value of the selected menu item.
  - Activate the selected sub-menu.

How to exit SAM

Use one of the following methods:

- Press the “MENU” button on the RC-transmitter, or
- Switch the set to STANDBY via the RC-transmitter, or
- Press the “EXIT” button on the DST.

5.2.3 Customer Service Mode (CSM)

Purpose

When a customer is having problems with his TV-set, he can call his dealer. The service technician can than ask the customer to activate the CSM, in order to identify the status of the set. Now, the service technician can judge the severity of the complaint. In many cases, he can advise the customer how to solve the problem, or he can decide if it is necessary to visit the customer.
The CSM is a read only mode; therefore, modifications in this mode are not possible.

How to activate CSM

Use one of the following methods:

- Press the “MUTE” button on the RC-transmitter **simultaneously** with the “MENU” button on the TV (top control) for at least 4 seconds.
- Key in the code **“123654”** via the standard RC transmitter.

Note: Activation of the CSM is only possible if there is no (user) menu on the screen!

How to navigate

By means of the “CURSOR-DOWN/UP” knob on the RC-transmitter, you can navigate through the menus.

Contents of CSM

CUSTOMER SERVICE MENU 1

- **SOFTWARE VERSION (example: TX21EU_1.0_01234).** Displays the built-in software version. In case of field problems related to software, software can be upgraded (for more details, see paragraph Software downloading). You will find details of the software versions in the chapter “Software Survey” of the “Product Survey - Colour Television” publication. This publication is generated four times a year.
- **FEATURE BOX**. The 12NC-number of the built-in Feature Box software.
- **SET TYPE.** This information is very helpful for a help desk/ workshop as reference for further diagnosis. In this way, it is not necessary for the customer to look at the rear of the TV-set.
- **CODE 1.** Gives the latest five errors of the error buffer. As soon as the built-in diagnose software has detected an error the buffer is adapted. The last occurred error is displayed on the left most position. Each error code is displayed as a 3-digit number. When less than 10 errors occur, the rest of the buffer is empty (000). See also paragraph Error Codes for a description.
- **CODE 2.** Gives the first five errors of the error buffer. See also paragraph Error Codes for a description.
- **VOLUME.** Gives the last status of the volume as set by the customer. The value can vary from 0 (volume is minimum) to 100 (volume is maximum). Volume values can be changed via the volume key on the RC-transmitter.
- **BRIGHTNESS.** Gives the last status of the brightness as set by the customer. The value can vary from 0 (brightness is minimum) to 100 (brightness is maximum). Brightness values can be changed via the “CURSOR LEFT” and “CURSOR RIGHT” keys on the RC-transmitter after pressing the “MENU” button and selecting “PICTURE” and “BRIGHTNESS”.
- **CONTRAST.** Gives the last status of the contrast as set by the customer. The value can vary from 0 (contrast is minimum) to 100 (contrast is maximum). Contrast values can be changed via “CURSOR LEFT” and “CURSOR RIGHT” keys on the RC-transmitter after pressing the “MENU” button and selecting “PICTURE” and “CONTRAST”.
- **COLOUR.** Gives the last status of the colour saturation, as set by the customer. The value can vary from 0 (colour is minimum) to 100 (colour is maximum). Colour values can be changed via “CURSOR LEFT” and “CURSOR RIGHT” keys on the RC-transmitter after pressing the “MENU” button and selecting “PICTURE” and “COLOUR”.
- **HUE.** Only relevant for NTSC-signals (e.g. some NTSC-DVD-discs).

CUSTOMER SERVICE MENU 2

- **SHARPNESS.** Gives the sharpness value. The value can vary from 0 (sharpness is minimum) to 7 (sharpness is maximum). In case of bad antenna signals, a too high value of the sharpness can result in a noisy picture. Sharpness values can be changed via the “CURSOR LEFT” and “CURSOR RIGHT” keys on the RC-transmitter after pressing the “MENU” button and selecting “PICTURE” and “SHARPNESS”.
- **HEADPHONE VOLUME.** Gives the last status of the head phone volume, as set by the customer. The value can vary from 0 (volume is minimum) to 100 (volume is maximum). Head phone volume values can be changed via the “CURSOR LEFT” and “CURSOR RIGHT” keys on the RC-transmitter after pressing the “MENU” button and selecting “SOUND” and “HEADPHONE VOLUME”.
- **DOLBY.** Indicates whether the received transmitter transmits Dolby sound (“ON”) or not (“OFF”). Attention: The presence of Dolby can only be tested by the software on the Dolby Signalling bit. If a Dolby transmission is received without a Dolby Signalling bit, this indicator will show “OFF” even though a Dolby transmission is received.
- **SURROUND MODE.** Indicates the by the customer selected surround mode (or automatically chosen mode). Possible values are “OFF”, “INCREDIBLE SURROUND” OR “DOLBY VIRTUAL”. These settings can be influenced after pressing the “MENU” button and selecting “SOUND” and SURROUND MODE”. It can also have been selected automatically by signalling bits (internal software).
- **TUNER FREQUENCY.** Indicates the frequency the selected transmitter is tuned to. The tuner frequency can be changed via the “CURSOR LEFT” and “CURSOR RIGHT” keys for fine tune after opening the installation menu and selecting “INSTALL” and “MANUAL INSTALL”.
- **DIGITAL OPTION.** Gives the selected digital mode, “PROGRESSIVE SCAN”, “MOVIE PLUS” or “PIXEL PLUS”. Change via “MENU”, “PICTURE”, “DIGITAL OPTIONS”.
- **CENTRE TRIM.** Not applicable for this set.
- **TV SYSTEM.** Gives information about the video system of the selected transmitter.
  - BG: PAL BG signal received.
  - DK: PAL DK signal received.
  - I: PAL I signal received.
  - L/La: SECAM L/La signals received.
  - M: NTSC M signal received with video carrier on 38.9 MHz.

CUSTOMER SERVICE MENU 3

- **BALANCE.** Indicates the balance settings, between “-50” and “+50”. Change via “MENU”, “SOUND”, and “BALANCE”. Not applicable for Dolby Pro Logic sets.
- **CENTRE MODE.** Indicates if centre mode is set “ON” or “OFF”. When centre mode is on, all TV speakers are used

as one centre speaker. Change Centre mode via "MENU", "SETUP", "SPEAKERS", and "CENTRE MODE".

- **DNR.** Gives the selected DNR setting (Dynamic Noise Reduction), "OFF", "MINIMUM", "MEDIUM", or "MAXIMUM". Change via "MENU", "PICTURE", "DNR"
- **NOISE FIGURE.** Gives the noise ratio for the selected transmitter. This value can vary from 0 (good signal) to 127 (average signal) and to 255 (bad signal). For some software versions, the noise figure will only be valid when "Active Control" is set to "medium" or "maximum".
- **SOURCE.** Indicates which source is used and the video/ audio signal quality of the selected source.
  Example: Tuner, Video/NICAM) Source: "TUNER", "EXT1", "EXT2", "EXT3", "EXT4", "SIDE", "AV1", "AV2", "AV3" or "AV4". Video signal quality: "VIDEO", "S-VIDEO", "RGB 1FH", "YPBPR 1FH 480P", "YPBPR 1FH 576P", "YPBPR 1FH 1080I", "YPBPR 2FH 480P", "YPBPR 2FH 576P", "YPBPR 2FH 1080I", "RGB 2FH 480P", "RGB 2FH 576P" or "RGB 2FH 1080I". Audio signal quality: "STEREO", "SPDIF 1", "SPDIF 2", or "SPDIF".
- **AUDIO SYSTEM.** Gives information about the audio system of the selected transmitter: "ANALOGUE MONO", "ANALOGUE STEREO", "PCM 2/0", "DD 1/0", "DD 2/0 LtRt", "DD 2/0 L0R0", "DD 2/1", "DD 2/2", "DD 3/0", "DD 3/1", "DD 3/2", "DD 1+1", "MPEG 1/0", "MPEG 2/0", "MPEG 2/0 LtRt", "MPEG 2/1", "MPEG 2/2", "MPEG 3/0", "MPEG 3/1", "MPEG 3/2", "MPEG 1+1" or "MPEG 2+2".
- **TUNED BIT.** Gives information about the tuning method of the stored pre-set. If a channel is found via "automatic installation", you will see the value "YES". When you change this (automatically found) frequency via "fine tune" adjustment (installation menu - manual installation), the displayed value will change to "NO". Therefore, when you see the value "NO" in this line, it is an indication that the received channel is a non-standard signal (e.g. of a VCR).
- **SURROUND SPEAKERS.** Not applicable in this set.
- **ON TIMER.** Indicates if the "On Timer" is set "ON" or "OFF" and if the timer is "ON" also displays start time, start day and program number. Change via "MENU", "TV", "FEATURES", and "ON TIMER".
- **PRESET LOCK.** Indicates if the selected preset has a child lock: "LOCKED" or "UNLOCKED". Change via "MENU", "TV", "FEATURES", "CHILD LOCK", and "CUSTOM LOCK".

CUSTOMER SERVICE MENU 4

- **CHILD LOCK.** Indicates the last status of the general child lock: "UNLOCK", "LOCK", or "CUSTOM LOCK". Change via "MENU", "TV", "FEATURES", "CHILD LOCK", and "LOCK".
- **AGE LOCK.** Indicates the last status of the EPG rating for child lock: "OFF", "4 YEARS", "6 YEARS", "8 YEARS", "10 YEARS", "12 YEARS", "14 YEARS" or "16 YEARS". This is only displayed if child lock is set to "CUSTOM LOCK"
- **LOCK AFTER.** Indicates at what time the child lock is set: "OFF" or e.g. "18:45" (lock time). This is only displayed if child lock is set to "CUSTOM LOCK"
- **CATEGORY LOCK.** Indicates the last status of the EPG theme child lock: "MOVIES", "NEWS", "SHOWS", "SPORTS", "CHILDREN", "MUSIC", "CULTURE", or "SERIES". This is only displayed if child lock is set to "CUSTOM LOCK". It is possible that more than one value is shown.
- **PROGRAM CATEGORY.** Indicates the theme of the selected transmitter: "MOVIES", "NEWS", "SHOWS", "SPORTS", "CHILDREN", "MUSIC", "CULTURE", or "SERIES".
- **TV RATINGS LOCK.** Only applicable for US.
- **MOVIE RATINGS LOCK.** Only applicable for US.
- **V-CHIP TV STATUS.** Only applicable for US.

CUSTOMER SERVICE MENU 5

- **V-CHIP MOVIE STATUS.** Only applicable for US.
- **OPTIONS 1.** Gives the option codes of option group 1 as set in SAM (Service Alignment Mode).
- **OPTIONS 2.** Gives the option codes of option group 2 as set in SAM (Service Alignment Mode).
- **AVL.** Indicates the last status of AVL (Automatic Volume Level): "ON" or "OFF". Change via "MENU", "TV", "SOUND", "AVL"
- **DELTA VOLUME.** Indicates the last status of the delta volume for the selected preset as set by the customer: from "-12" to "+12". Change via "MENU", "TV", "SOUND", "DELTA VOLUME".
- **FRONT SPKR DIST.** Not applicable for this set.
- **FRONT SPKR DIST.** Not applicable for this set.

How to exit CSM

Use one of the following methods:

- After you press a key on the RC-transmitter (with exception of the "CHANNEL", "VOLUME" and digit (0-9) keys), or
- After you switch the TV-set "OFF" with the mains switch.

5.3 Problems and Solving Tips (related to CSM)

Note: Below described problems are all related to the TV settings (visible in the CSM menu). The procedures to change the value (or status) of the different settings are described above. New value(s) are automatically stored.

5.3.1 Picture Problems

Snowy/noisy picture

1. Check in CSM line NOISE FIGURE. In case the value is "127" or higher, and the value is also high on other programs, check the aerial cable/aerial system. For some software versions, the noise figure will only be valid when "Active Control" is set to "medium" or "maximum".
2. Check in CSM lines SHARPNESS and NOISE FIGURE. In case the value of line SHARPNESS is "3" or "4" and the value of line NOISE FIGURE is high ("127" or higher), decrease the "Sharpness" value.

Picture too dark

1. Press "Menu", "TV", "Picture", "Smart Picture". In case the picture improves, increase the "Brightness" or the "Contrast" value. The new value(s) are automatically stored (in "personal" pre-set) for all TV channels.
2. Check in CSM line BRIGHTNESS and CONTRAST. If the value of these lines is low (< "10"), increase the "Brightness" or the "Contrast" value via the user menu.

Picture too bright

1. Press "Menu", "TV", "Picture", "Smart Picture". In case the picture improves, decrease the "Brightness" or the "Contrast" value. The new value(s) are automatically stored (in "personal" pre-set) for all TV channels.
2. Check in CSM lines BRIGHTNESS and CONTRAST. If the value of these line is high (> 50), decrease the "Brightness" value or increase the "Contrast" value via the user menu.

White line around picture elements and text

1. Press "Menu", "TV", "Picture", "Smart Picture". In case the picture improves, decrease the "Sharpness" value. The new value is automatically stored (in "personal" pre-set) for all TV channels.
2. Check in CSM line "Sharpness". If the value is high, decrease it. The new value is automatically stored for all TV channels.

No picture

Check in CSM line TUNED BIT. In case the value is "No", install the required program again. Open the installation menu and perform manual installation.

No picture

No proper signal is received. Check the aerial cable/aerial system.

No picture or unstable picture

A scrambled or decoded signal is received.

Black and white picture

Check in CSM line COLOUR. In case the value is low (< "10"), increase the “Colour” value via the user menu. The new value is automatically stored for all TV channels.

No colours/colour lines around picture elements or colours not correct or unstable picture

1. Check in CSM line TV SYSTEM. If a “strange” system pops up, something has gone wrong during installation. Re-install the channel.
2. If in CSM line TV SYSTEM is “L”, the installed system for this pre-set is “France”, while “West Europe” is required. Install the required program again: open the installation menu and perform manual installation. Select system “West Europe”.

Menu text not sharp enough

1. Press “MENU”, “TV”, “PICTURE”, “SMART PICTURE”. In case picture improves, decrease the contrast value. The new value(s) are automatically stored for all TV channels.
2. Check line “Contrast”. If the value is high, decrease the contrast value.

5.3.2 Sound Problems

No sound from left and right speaker

Check line 6 “Volume”. The value is low. Increase the value of “Volume”. The new value(s) are automatically stored (in “personal” pre-set) for all TV channels.

5.4 ComPair

5.4.1 Introduction

ComPair (Computer Aided Repair) is a service tool for Philips Consumer Electronics products. ComPair is a further development on the European DST (service remote control), which allows faster and more accurate diagnostics. ComPair has three big advantages:

- ComPair helps you to quickly get an understanding on how to repair the chassis in a short time by guiding you systematically through the repair procedures.
- ComPair allows very detailed diagnostics (on I^2C level) and is therefore capable of accurately indicating problem areas. You do not have to know anything about I^2C commands yourself because ComPair takes care of this.
- ComPair speeds up the repair time since it can automatically communicate with the chassis (when the microprocessor is working) and all repair information is directly available. When ComPair is installed together with the SearchMan electronic manual of the defective chassis, schematics and PWBs are only a mouse click away.

5.4.2 Specifications

ComPair consists of a Windows based fault finding program and an interface box between PC and the (defective) product. The ComPair interface box is connected to the PC via a serial or RS232 cable.
For this chassis, the ComPair interface box and the TV communicate via a bi-directional service cable via the service connector.

The ComPair fault finding program is able to determine the problem of the defective television. ComPair can gather diagnostic information in two ways:

- Automatic (by communication with the television): ComPair can automatically read out the contents of the entire error buffer. Diagnosis is done on I^2C level. ComPair can access the I^2C bus of the television. ComPair can send and receive I^2C commands to the micro controller of the television. In this way, it is possible for ComPair to communicate (read and write) to devices on the I^2C buses of the TV-set.
- Manually (by asking questions to you): Automatic diagnosis is only possible if the micro controller of the television is working correctly and only to a certain extends. When this is not the case, ComPair will guide you through the fault finding tree by asking you questions (e.g. *Does the screen give a picture? Click on the correct answer: YES / NO*) and showing you examples (e.g. *Measure test-point I7 and click on the correct oscillogram you see on the oscilloscope*). You can answer by clicking on a link (e.g. text or a waveform picture) that will bring you to the next step in the fault finding process.

By a combination of automatic diagnostics and an interactive question / answer procedure, ComPair will enable you to find most problems in a fast and effective way.

Beside fault finding, ComPair provides some **additional features** like:

- Up- or downloading of pre-sets.
- Managing of pre-set lists.
- Emulation of the Dealer Service Tool (DST).
- If both ComPair and SearchMan (Electronic Service Manual) are installed, all the schematics and the PWBs of the set are available by clicking on the appropriate hyperlink.
  Example: *Measure the DC-voltage on capacitor C2568 (Schematic/Panel) at the Mono-carrier.*
  - Click on the “Panel” hyperlink to automatically show the PWB with a highlighted capacitor C2568.
  - Click on the “Schematic” hyperlink to automatically show the position of the highlighted capacitor.

5.4.3 Stepwise Start-up

Under normal circumstances, a fault in the power supply, or an error during start-up, will switch the television to protection mode. ComPair can take over the initialisation of the television. In this way, it is possible to distinguish which part of the start-up routine (hence which circuitry) is causing the problem. Take notice that the transition between two steps can take some time, so give the set some time to reach a stable state. During the transition time, the LED can blink strangely.

Stepwise start-up explanation

This is realised via ComPair and is very helpful when a **protection** is activated (see also chapter “Protections”). The following diagram shows the start-up procedure of the set. Every step of the stepwise start-up (also called trapped start-up) in the diagram corresponds with the number of times the LED blinks.

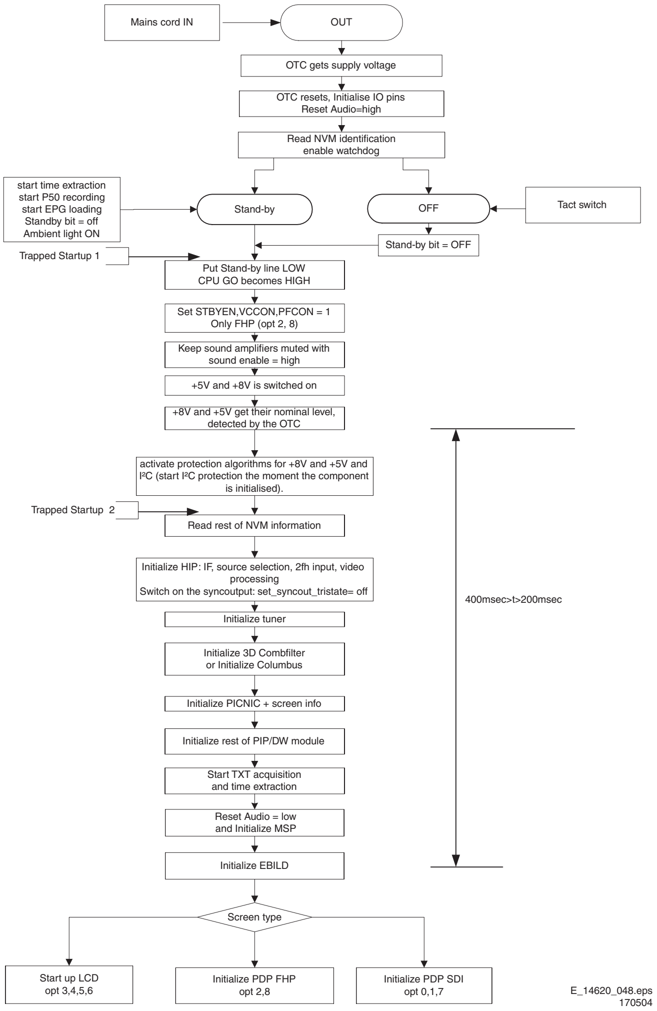

Mains cord IN
OUT
OTC gets supply voltage
OTC resets, Initialise IO pins
Reset Audio=high
Read NVM identification
enable watchdog
start time extraction
start P50 recording
start EPG loading
Standby bit = off
Ambient light ON
Stand-by
OFF
Tact switch
Stand-by bit = OFF
Trapped Startup 1
Put Stand-by line LOW
CPU GO becomes HIGH
Set STBYEN,VCCON,PFCON = 1
Only FHP (opt 2, 8)
Keep sound amplifiers muted with
sound enable = high
+5V and +8V is switched on
+8V and +5V get their nominal level,
detected by the OTC
activate protection algorithms for +8V and +5V and
I²C (start I²C protection the moment the component
is initialised).
Trapped Startup 2
Read rest of NVM information
Initialize HIP: IF, source selection, 2fh input, video
processing
Switch on the syncoutput: set_syncout_tristate= off
Initialize tuner
Initialize 3D Combfilter
or Initialize Columbus
Initialize PICNIC + screen info
Initialize rest of PIP/DW module
Start TXT acquisition
and time extraction
Reset Audio = low
and Initialize MSP
Initialize EBILD
400msec>t>200msec
Screen type
Start up LCD
opt 3,4,5,6
Initialize PDP FHP
opt 2,8
Initialize PDP SDI
opt 0,1,7
E_14620_048.eps
170504

Figure 5-3 Stepwise start-up

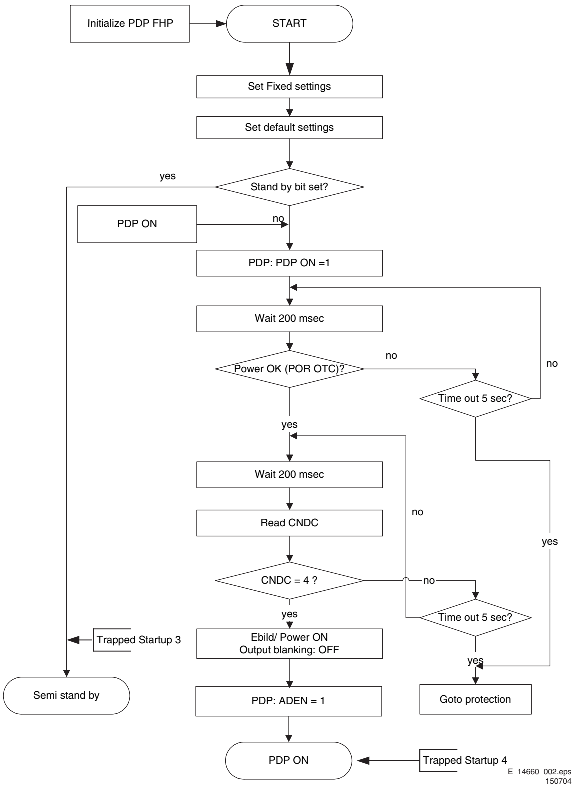

Initialize PDP FHP
START
Set Fixed settings
Set default settings
yes
Stand by bit set?
PDP ON
no
PDP: PDP ON =1
Wait 200 msec
Power OK (POR OTC)?
no
no
Time out 5 sec?
yes
Wait 200 msec
no
Read CNDC
yes
CNDC = 4 ?
no
yes
Time out 5 sec?
Trapped Startup 3
Ebild/ Power ON
Output blanking: OFF
yes
Semi stand by
PDP: ADEN = 1
Goto protection
PDP ON
Trapped Startup 4
E_14660_002.eps
150704

Figure 5-4 Stepwise start-up part 2: Initialise FHP

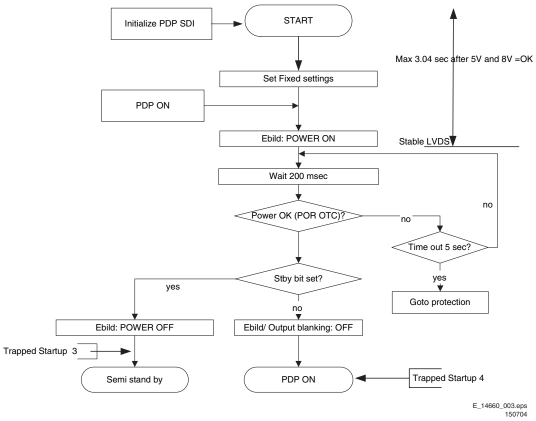

Initialize PDP SDI
START
Max 3.04 sec after 5V and 8V =OK
Set Fixed settings
PDP ON
Ebild: POWER ON
Stable LVDS
Wait 200 msec
no
Power OK (POR OTC)?
no
Time out 5 sec?
yes
Stby bit set?
yes
Goto protection
no
Ebild: POWER OFF
Ebild/ Output blanking: OFF
Trapped Startup 3
Semi stand by
PDP ON
Trapped Startup 4
E_14660_003.eps
150704

Figure 5-5 Stepwise start-up part 2: Initialise SDI

Note (*):

- When the set is in stepwise mode and, due to stepping-up, a protection is activated, the set will really go into protection (blinking LED). The set will not leave the stepwise mode however. If state X is the state where the set went to protection, stepwise start-up will return to state X-1. At state (X-1) diagnostic measurements can be performed. Also, in the short time the set is in state X but not yet in protection, you can also do some measurements.

5.4.4 How To Connect

This is described in the chassis fault finding database in ComPair.

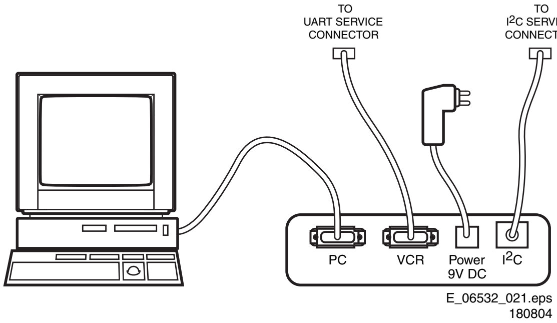

TO
UART SERVICE
CONNECTOR
TO
I2C SERVICE
CONNECTOR
PC
VCR
Power
9V DC
I2C
E_06532_021.eps
180804

Figure 5-6 ComPair interface connection

5.4.5 How To Order

ComPair order codes (EU/AP/LATAM):

- Starter kit ComPair32/SearchMan32 software and ComPair interface (excl. transformer): 3122 785 90450.
- ComPair interface (excl. transformer): 4822 727 21631.
- Starter kit ComPair32 software (registration version): 3122 785 60040.
- Starter kit SearchMan32 software: 3122 785 60050.
- ComPair32 CD (update): 3122 785 60070 (year 2002), 3122 785 60110 (year 2003 onwards).
- SearchMan32 CD (update): 3122 785 60080 (year 2002), 3122 785 60120 (year 2003), 3122 785 60130 (year 2004).
- ComPair firmware upgrade IC: 3122 785 90510.
- Transformer (non-UK): 4822 727 21632.
- Transformer UK: 4822 727 21633.
- ComPair interface cable: 3122 785 90004.
- ComPair interface extension cable: 3139 131 03791.
- ComPair UART interface cable: 3122 785 90630

Note: If you encounter any problems, contact your local support desk.

5.5 Error Codes

5.5.1 Introduction

The error code buffer contains all detected errors since the last time the buffer was erased. The buffer is written from left to right, new errors are logged at the left side, and all other errors shift one position to the right.
When an error has occurred, the error is added to the list of errors, provided the list is not full or the error is a protection error.
When an error occurs and the error buffer is full, then the new error is not added, and the error buffer stays intact (history is maintained), except when the error is a protection error.
To prevent that an occasional error stays in the list forever, the error is removed from the list after 50+ operation hours.
When multiple errors occur (errors occurred within a short time span), there is a high probability that there is some relation between them.

5.5.2 How to read the Error Buffer

Use one of the following methods:

- On screen via the SAM (only if you have a picture). Examples:
  - **0 0 0 0 0**: No errors detected
  - **6 0 0 0 0**: Error code 6 is the last and only detected error
  - **9 6 0 0 0**: Error code 6 was first detected and error code 9 is the last detected error
- Via the blinking LED procedure (when you have no picture). See next paragraph.
- Via ComPair.

5.5.3 How to clear the Error Buffer

Use one of the following methods:

- By activation of the “RESET ERROR BUFFER” command in the SAM menu.
- With a normal RC, key in sequence “MUTE” followed by **“062599”** and “OK”.
- When you transmit the commands “DIAGNOSE” - “99” - “OK” with ComPair (or with a DST).
- If the content of the error buffer has not changed for 50+ hours, it resets automatically.

5.5.4 Error Codes

In case of non-intermittent faults, clear the error buffer before you begin the repair. This to ensure that old error codes are no longer present. Before clearing the buffer, write down the content, as this history can give you significant information.
If possible, check the entire contents of the error buffer. In some situations, an error code is only the result of another error code and not the actual cause (e.g., a fault in the protection detection circuitry can also lead to a protection).
There are various errors:

- I^{2}C device errors.
- I^{2}C bus errors.
- Protection errors.
- Errors not related to an I^{2}C device, but of importance:
  - **FEM (Falconic with Embedded Memory) (Error 26):** at start-up, after initialisation of the PICNIC, the presence of the FEM can be checked.

Table 5-2 Error Table

Error	Device	Description	Def. item	Def. Module indication	Diagram
1	M24C64	NVM, spontaneous blinking error 1	7011	Control	B5a
3	SAA4978	PICNIC	7713	Feature Box	B3a
4	Supply 5 V	5V protection	/	+5V Supply	B5a
5	Supply 8 V	8V protection	/	+8V Supply	B5a
6	Slow I^{2}C bus blocked	Spontaneous blinking error 6	/	Slow I^{2}C Blocked	/
8	TDA932x	HIP High-end Input Processor	7323	Chroma IF IO	B2
13	UV1318/...	Tuner protection	1T01	Tuner	B13a
14	MSPxxxx	ITT sound processor	7A02	Audio module	B6a
18	Fast I^{2}C bus blocked	Spontaneous blinking error 18	/	Fast I^{2}C Blocked	/
21	M62320P	I/O Expander	7P56	Video Dual Screen	B15b
23	UV1318/...	Sub tuner	1T02	Video Dual Screen	B13b
24	SAB9083H	PIP Muppet	7PA6	Video Dual Screen	B15c
25	Z86130	V-CHIP (US only)	7P51	Video Dual Screen	B15b
26	SAA4998	FEM (Falconic with Embedded Memory)	7760	+3V (FBX) Supply	B3b
27	T6TX5	Eagle 1C	7720	+3V (FBX) Supply	B3c
32	M29W400DT	Flash Ram (EPG)	7012	EPG Memory	B5a
34	TDA932x	Second HIP	7P09	Video Dual Screen	B15a
35	T6TU5	Columbus	7752	+3V (FBX) Supply	B3d
53	AD9883A	AD converter	7E23 / 7L01	HD	B19c / B19a
55	DC/DC converter	One of the voltages is not ok + protection error	/	Supply	/
56	EPLD	EPLD error	7V01	Video control	B19d
76	Audio supply	Audio supply protection	/	/	/
82	TDA7309	Headphone processor	7A06	Video Dual Screen	B6a
83	TEA6422	Source select matrix audio	7I17	Audio Source Select	B14d

Note:

- Error codes 1, 6, or 18 are protection codes and in this case, supplies of some circuits will be switched “OFF”. Also, in protection, the LED will blink the number of times equivalent to the most recent error code.

5.6 The Blinking LED Procedure

5.6.1 Introduction

Via this procedure, you can make the contents of the error buffer visible via the front LED. This is especially useful for fault finding, when there is no picture.

When the SDM is activated, the front LED will show (blink) the contents of the error-buffer. Error-codes > 10 are shown as follows:

- A long blink of 750 ms (which is an indication of the decimal digit),
- A pause of 1.5 s,
- “n” short blinks (where “n” = 1 - 9),
- When all the error-codes are displayed, the sequence finishes with a LED blink of 3 s,
- The sequence starts again.

Example: Error 12 9 6 0 0.
After activation of the SDM, the front LED will show:

- 1 long blink of 750 ms (which is an indication of the decimal digit) followed by a pause of 1.5 s,
- 2 short blinks followed by a pause of 3 s,
- 9 short blinks followed by a pause of 3 s,
- 6 short blinks followed by a pause of 3 s,
- 1 long blink of 3 s to finish the sequence,
- The sequence starts again.

Note: If errors 1, 6, or 18 occur, the LED always gives the last occurred error even if the set is NOT in service mode.

5.6.2 How to Activate

Use one of the following methods:

- Activate the SDM (only via soldering pads marked “SDM” on SSB). The blinking front LED will show the entire contents of the error buffer (this works in “normal operation” mode and in “protection” mode).
- Transmit the commands “MUTE” - **“062500”** - “OK” with a normal RC. The complete error buffer is shown. Take notice that it takes some seconds before the blinking LED starts.
- Transmit the commands “MUTE” - **“06250x”** - “OK” with a normal RC (where “x” is a number between 1 and 5). When x= 1 the last detected error is shown, x= 2 the second last error, etc.... Take notice that it takes some seconds before the blinking LED starts.
- “DIAGNOSE X” with the DST (where “x” is a number between 1 and 5). When x= 1 the last detected error is shown, x= 2 the second last error, etc.... When x = 0 all errors are shown.

5.7 Protections

5.7.1 Introduction

This chassis has only one microprocessor (OTC), which remains active during Stand-by. This because power of the microprocessor and the attached memory chip set is coming from the 3V3 supply, which is derived from the 5V Stand-by-circuitry. Therefore, in both Power-on as in Stand-by mode, the microprocessor is connected to this power supply.

If a fault situation is detected, an error code will be generated and if necessary, the set is put in protection mode. The protection mode is indicated by the blinking of the front LED at a frequency of 3 Hz (or by a coded blinking in special cases).

The content of the error buffer can be read via the service menu (SAM), the blinking LED procedure or via DST/ComPair.

To get a quick diagnosis, this chassis has three service-modes implemented:

- The **Customer Service Mode** (CSM).
- The **Service Default Mode** (SDM). Start-up of the set in a predefined way.
- The **Service Alignment Mode** (SAM). In this mode, items of the set can be adjusted via a menu.

You can activate both SDM and SAM modes via the “service pads” on the SSB, via an RC-transmitter (DST or standard RC), or via ComPair. It is not possible to activate the SAM in “stand-by”; the TV has to be in “normal operation” mode.

The “Protection Diagram” shows the structure of the protection system. See diagram below.

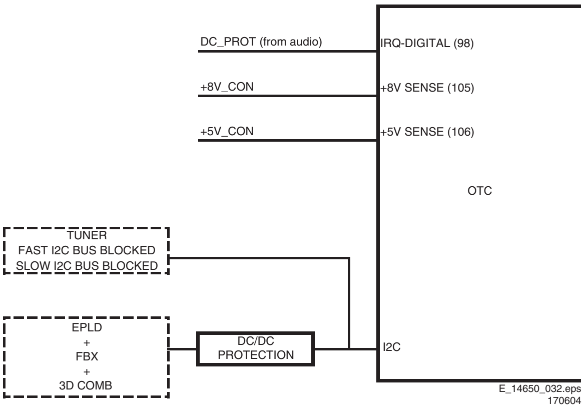


Figure 5-7 Protection diagram

There are several types of protections:

- I^{2}C related protections.
- OTC related protections (via polling on I/O pins or via algorithms).
- Hardware protection

All protections are explained below.

5.7.2 I^{2}C Related Protections

In normal operation, some registers of the I^{2}C controlled ICs are refreshed every 200 ms. During this sequence, the I^{2}C buses and the I^{2}C ICs are checked.
An I^{2}C protection will take place if the SDA and SCL lines are short-circuited to ground, or to each other. An I^{2}C error will also occur, if the power supply of the IC is missing.

DC/DC protection: When a 3V3 supply is short-circuited, the DC/DC converter switches “off” and goes in protection. The FBX, EPLD IC, and 3D comb IC have no supply voltage and give no acknowledge. In this case, the set should go into protection. An error code is written in the NVM: DC/DC error.

FBX protection: the FBX protection is not available any more. It is replaced by the DC/DC protection.

5.7.3 OTC Related Protections

If a protection is detected at an OTC input, the OTC will start to scan all protection inputs every 200 ms for 5 times. If the protection on one of the inputs is still active after 1 s, the microprocessor will put the set in the protection mode. Before the scanning is started, a so-called “ESD refresh” is carried out. This is done, because the interrupt on one of the inputs is possibly caused either by a flash or by ESD. As a flash or ESD can influence IC settings, the HIP, MSP, 3D Comb and wireless module (not used in this set) are initialised again, to ensure the normal picture and sound conditions of the set.

8 V and 5 V protections: The microprocessor senses the presence of the 8 V and 5 V (via the “+5V_CON” and “+8V_CON” lines). If one (or both) of these voltages is (are) not present, an error code is stored in the error buffer of the NVM, and the set is put in the protection mode.

Audio DC protection: The OTC senses if the audio module is in protection via IRQ-DIGITAL (pin 98 of OTC). If this is the case, the OTC puts the set in protection.

5.7.4 Hardware Protection

Short-circuiting the 3V3 supply from the DC/DC converter will shut down the DC/DC converter. The absence of the 3V3 supply line is also sensed via I^2C (see description DC/DC protection above), this is useful if there is something wrong in the detection circuit of the DC/DC converter. There are no hardware protections in this chassis, which switch off the main supply.

5.8 Repair tips

5.8.1 Power Supply Unit (for Fujitsu 42” plasma displays)

Below a troubleshoot sequence for the **FHP** power supply is given (so this is **not** valid for the **SDI** power supply, this is explained further on).

Stand-by Supply
1. 400V present?
2. +9V_STDBY, +5V_STDBY, and 25V_HOT present?

Preconditioner
1. Relay 1450 and 1440 “on” = switch “on” and supply “on” (LATCH= “H” and STANDBY= “L”).
2. 400V or rectified mains present on item 2616?
3. 40V present on item 2664?
4. 15V present on item 2662?

LLC Supply
1. 25V_HOT (from Stand-by supply) present?
2. 25V_HOT_SW (from Preconditioner) present?
3. 17V on pin 15 of item 7001 present?
4. Vcego= “H” and LATCH= “H”?
5. Vrs present? (Vrs=Vs/67).
6. Remark: Vs_unswitched = 65V when switch 7050 is open.

Va Supply
1. Vs_unswitched present?
2. 30V on item 3133 present?
3. Vsa_control= “L” (Vsago= “H” and Vs_lowlim= “H”)
4. Vra present? (Vra=Va/48).

Vcc Supply
1. Vs_switched present?
2. Vccgo= “H”? (Vcego= “H”).

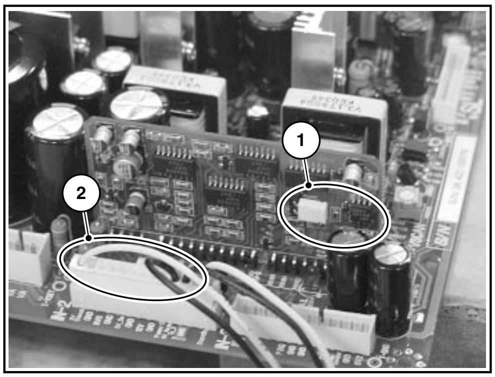
Vs (switched)
1. 95V present on cathode of item 6054?
2. POK= “H” and Vsa_control= “L”? (POK= “H” when Vs, Va, Vcc, 12V, and 8V6 are above their lower limit)

5.8.2 Power Supply Unit (for Samsung 42” plasma displays)

Below, a troubleshoot method for the **SDI 42”** power supply is given. First, a description is given for single board testing (so **without** the surrounding electronics).

This PSU is for service a “black box”. When defective (this can be traced via error-codes in the error buffer, or by strange phenomena), a new panel must be ordered and after receipt, the defective panel must be send for repair.

Main Power Supply (“single board” testing)



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150604

Figure 5-8 Diagnose of SDI 42” main supply [1]

1. Remove the Main Supply panel from the TV set.
2. Remove jumper BJ8301 (1).
3. Plug the PSU to the mains: the +9V_STDBY should be present.
4. Connect pin 1 and 10 on connector CN8004 (2).
   - This simulates the ON/OFF switch.
   - LED L8003 must light up and the PSU is in STANDBY mode.
   - +5V2 should be present

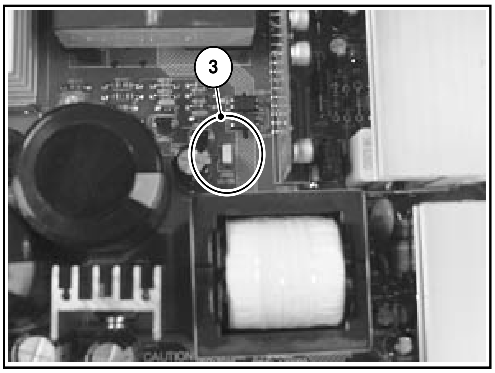

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Figure 5-9 Diagnose of SDI 42” main supply [2]

1. Place jumper BJ8002 (3). This simulates the Vs_on signal (no LVDS, prevents protection).
2. Connect pin 11 with pin 13 on connector CN8004:
   - This simulates the STANDBY signal.
   - LEDs L8001 and L8002 should light up.
   - All voltages should be present.

Sub Power Supply ("single board" testing)

There are two methods:

1. First check the Main Supply. If it is ok, connect the two supplies, and check the Sub Supply (**attention:** remove jumper BJ8302 first). All Sub Supply voltages should be present now.
2. Remove the Sub Supply from the TV:
   - Connect 380 VDC between pin 1 and 3 of connector CN9700 (+380 V on pin 1).
   - Connect 17 VDC between pin 4 and 5 of connector CN9700 (+17 V on pin 5).
   - All Sub Supply voltages should be present now.

Power Supply ("in set" testing)

Both PSUs can also be tested "in the set":

1. First, disconnect all boards that are not feeding the plasma panel (SSB, Audio Amplifier, Ambi Light Inverter). Do **not** unplug the Sub Supply from the Main Supply.
2. Plug the PSU to the mains: the +9V_STDBY should be present.
3. Connect pin 9 and 10 on connector CN9005 on the Sub Supply:
   - This simulates the ON/OFF switch.
   - LED L8003 must light up and the PSU is in STANDBY mode.
   - +5V2 should be present
4. Connect pin 4 with pin 7 on connector CN9005:
   - This simulates the STANDBY signal.
   - LEDs L8001 and L8002 should light up.
   - All voltages should be present.

Important: After testing, replace all items in their original status!

5.8.3 3V3 Supply (DC/DC converter on the SSB)

As mentioned above, the DC/DC converter is switched "off" when something goes wrong (detection of a missing 3V3 supply at one of the devices supplied by the 3V3). Because of this, the set goes to protection (I^2C protection). Error code "55" is logged.
For further diagnoses, you need to overrule the I^2C protection: put the set in Service Default Mode by means of the solder pads on the SSB.
The DC/DC converter is still not working because it is switched "off" by the 3V3_FAULT line (schematic B12). Now you have some possibilities:

1. First, measure the impedance over diode 6U06. In normal conditions, you should measure approximately 120 ohm (if possible, verify this with another set). If the impedance is much too low, do not try to start up the converter as mentioned below. Remind that if FET 7U03 is short-circuited, this will also influence your measurement.
2. Desolder coils 5U05 and 5U06, connect an external 3V3 supply at capacitor 2U23 (current limitation to 500 mA) and a second external 3V3 supply at capacitor 2U31 (current limitation to 800 mA). The normal working current of the 3V3_SIM line is approximately 400 mA and the normal working current for the 3V3_DCDCFBX line is approximately 700 mA. Therefore, if one of the currents exceeds their nominal value you can determine in which circuit the overload is situated. If the set would start up and you have normal picture, there is probably no overload but a problem in the detection circuits.
3. If you do not have two external power supplies, you can do the following: Desolder coils 5U02, 5U03, and 5U04 (you must desolder all three, otherwise the circuit could be damaged), connect an external power supply of 3V3 at the cathode of diode 6U06. Make sure to limit the current of this external supply to approximately 1200 mA. If the supplied current exceeds 1100 mA (approximately normal working current) you can conclude that one of the devices supplied by 3V3 is short-circuited.
4. Another possibility is to force the converter to start up by short-circuiting (and keep short-circuited) resistor 3U25 (B12).
   Caution: Be aware that this can damage the set. Even if you measure approximately 120 ohm over diode 6U06, there can still be something wrong in the converter itself. By short-circuiting resistor 3U25, the internal protection of the converter is disabled.

5.8.4 ComPair

A "Service" (ComPair) connector is implemented at the rear side of the set, which is directly accessible. In addition to this, there is also a blinking LED procedure to show the contents of the error buffer.

When you use ComPair, you have the possibility to activate a "stepwise start-up" mode. With this mode, you can initiate the start-up sequence step by step. This also means that in certain steps, some protections are not activated. This is sometimes very convenient during repair.

5.8.5 Protections

Activating SDM via the "service pads" will overrule the processor-controlled protections, but not the hardware protections. This means, that the A/D-input protections (5 and 8 V) and the I^2C "not-acknowledging" info of FBX + EPLD + 3D Comb and of the tuner are overruled.
Caution: When doing this, the service technician must know what he is doing, as it could lead to damaging the set.

5.8.6 Repair tip table

Table 5-3 Repair tips

Phenomenon	Possible Cause	Repair tip
“F” in right corner of the screen and set is not reacting on remote control. The local keyboard is functioning.	TV is in factory mode.	Press menu button on local keyboard for at least 3 seconds. Set will leave factory mode and function normally again.
No picture, LED blinking at 3 Hz.	Set is in protection due to various causes. For error codes see error-code list.	You have no picture, so: - Read the error buffer via ComPair (error buffer is accessible when set is in protection, ComPair-file will guide you to this). - Read the blinking LED information via standard remote command <mute>**06250x**<ok>. - Or you read the error code sequence via standard remote command <mute>**062500**<ok>. When you have found the error, check the circuitry related to the supply voltage and I^{2}C-communication or the circuitry that triggers the protection.
No picture, LED blinking with code 6-6-6 or 18-18-18.	No communication on slow I^{2}C- or fast I^{2}C-bus.	As processor cannot communicate with one of the 2 buses it the stand-by-LED spontaneously starts blinking 6-6-6-etc. or 18-18-18-etc... If in the error buffer somewhere is an error 6 or 18, these will have the highest priority starting the mentioned blinking. Measure dependent of the error on the I^{2}C-bus which device is loading the bus. (Use I^{2}C-overview)
No picture, LED blinking with code 1-1-1.	No communication on NVM-I^{2}C bus to the uP.	As the uP cannot communicate with the NVM I^{2}C bus, it spontaneously starts blinking 1-1-1. **Note:** when there is no access to the NVM, a lot of picture setting can go wrong.
No RC-reception. Blue LED does not echo RC-commands.	uP circuitry or RC-receiver is defective.	In case the set does react on a local keyboard operation, you must check the RC-receiver circuitry (diagram J).
Picture is not synchronised.	The sync is derived in the HIP.	Check crystals in the HIP circuit on bad contacts.
Picture is distorted.	Check video-path in Service Default Mode.	Investigate whether there is an error code present in the error buffer. In case there is one, check the I^{2}C-bus and/or supply lines (see overview supply lines). Measure and check signal path Tuner-HIP-FBX-EPLD.
Picture with horizontal stripes.	Pixel Plus processing is malfunctioning	Check functionality on circuitry (B3a, B3b, B3c and B3d) of PICNIC, FEM, EAGLE, COLUMBUS and/or field memories. **Tip:** the whole Pixel Plus chipset (4 ICs + Field Memories) can be diagnosed via ComPair.
No NextView (EPG).	IC7012 defective or not powered.	Check circuitry around IC7012 on diagram B5A.
No Teletext.	IC7007 defective or not powered.	Check circuitry around IC7007 on diagram B5A.
Problems caused by EPG (Electronic Program Guide). The TV set "hangs".	Problems with NexTView EPG broadcasts.	To switch from EPG 2C3 to Teletext guide. Press for 4 seconds, simultaneously the Menu button on the TV and digit 0 on the remote. The option settings for NexTView type and FlashRAM will not change.
NexTView EPG is not functioning only Teletext guide.	EPG version 2C3 is switched “off” during production.	To switch from Teletext guide to EPG 2C3. Press for 4 seconds, simultaneously the Menu button on the TV and digit 1 on the remote. The option settings for NexTView type and Flashram will not change.
Various symptoms, due to missing local supply voltage.	An interrupted fuse, NFR-resistor or connection.	When no symptom or error code leads you to a specific circuitry, use the supply lines overview (see supply lines overview), for a quick scan of all supply lines.
No sound at the speakers but sound at monitor out.	Possible problem with the class D amplifier	Check circuitry around IC7700 on diagram SA3 (LCD) or C (PDP).
No sound at the speakers but sound at monitor out.	Sound enable from OTC is HIGH, speakers are muted	Check pin 95 of OTC on diagram B5a.
No sound at the speakers not at monitor out, but sound at SCART 1 output.	POR line is low, anti plop circuit mutes the sound	Check pin 8 on connector 1739 on audio panel. Diagram C for PDP sets and diagram SA3 for LCD sets
No sound from any output (except headphone)	Reset audio is high or MSP is not properly reset	Check pin 16 of MSP (diagram B6a) and circuitry around MSP.
No sound from the tuner but sound from any other input.	Problem with the delay line (PDP sets only)	Check circuitry on diagram B6d.

5.9 Software Downloading

In this chassis, you can **upgrade** the main software via ComPair without removing the back cover of the set (it is possible that early production sets don’t have a hole in the back plate, in this case you have to remove the back plate). The switch, which is needed for the software downloading procedure, can be reached through a gap in the back cover or the SSB shielding. The switch can be operated with a toothpick or something like that. Make sure that you do not damage the PWB with sharp objects. You can find more information on how this procedure works in the ComPair file. It is possible that not all sets are equipped with the hardware, needed to make software upgrading possible. To speed up the programming process the firmware of the ComPair interface can be upgraded. See paragraph “How To Order” for the order number.

Personal Notes:

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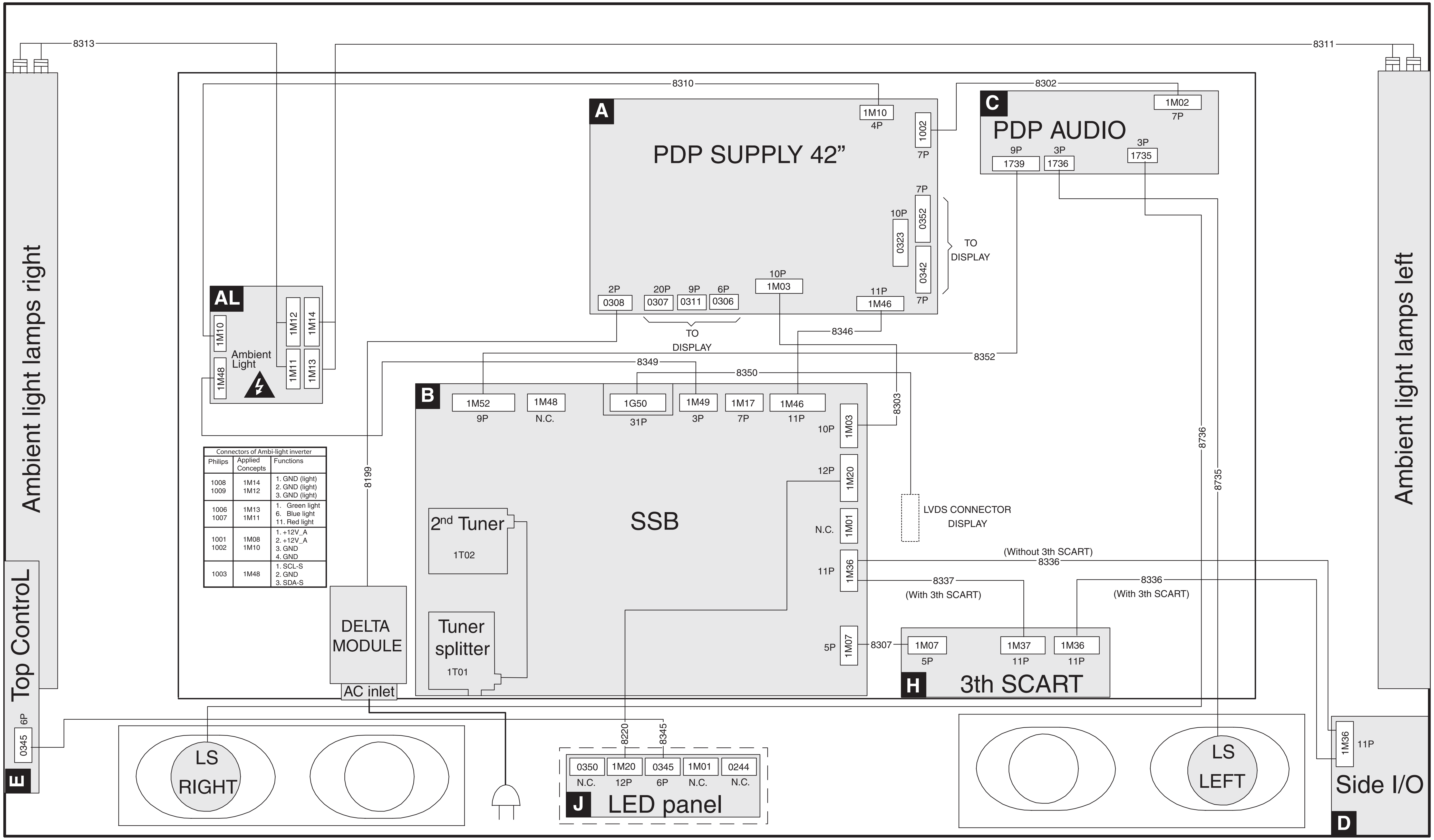
6. Block Diagrams, Testpoint Overview, and Waveforms

Wiring Diagram 42 Inch FHP Step

WIRING 42" FHP


8313
8311
8310
8302
A
PDP SUPPLY 42"
1M10
4P
1002
7P
7P
0352
10P
0323
0342
7P
TO DISPLAY
2P
0308
20P
0307
9P
0311
6P
0306
TO DISPLAY
10P
1M03
11P
1M46
C
PDP AUDIO
1M02
7P
9P
1739
3P
1736
3P
1735
AL
1M10
1M48
Ambient Light
1M12
1M11
1M14
1M13
8346
8352
8349
8350
8303
8199
8736
8735
B
1M52
9P
1M48
N.C.
1G50
31P
1M49
3P
1M17
7P
1M46
11P
1M03
10P
1M20
12P
1M01
N.C.
1M36
11P
1M07
5P
SSB
2nd Tuner
1T02
Tuner splitter
1T01
DELTA MODULE
AC inlet
LVDS CONNECTOR DISPLAY
(Without 3th SCART)
8336
8337
(With 3th SCART)
8336
(With 3th SCART)
8307
1M07
5P
1M37
11P
1M36
11P
H
3th SCART
Ambient light lamps right
Ambient light lamps left
Top ControL
6P
0345
E
LS RIGHT
8220
8345
0350
N.C.
1M20
12P
0345
6P
1M01
N.C.
0244
N.C.
J
LED panel
LS LEFT
1M36
11P
Side I/O
D

Connectors of Ambi-light inverter		
Philips	Applied Concepts	Functions
1008 1009	1M14 1M12	1. GND (light) 2. GND (light) 3. GND (light)
1006 1007	1M13 1M11	1. Green light 6. Blue light 11. Red light
1001 1002	1M08 1M10	1. +12V_A 2. +12V_A 3. GND 4. GND
1003	1M48	1. SCL-S 2. GND 3. SDA-S

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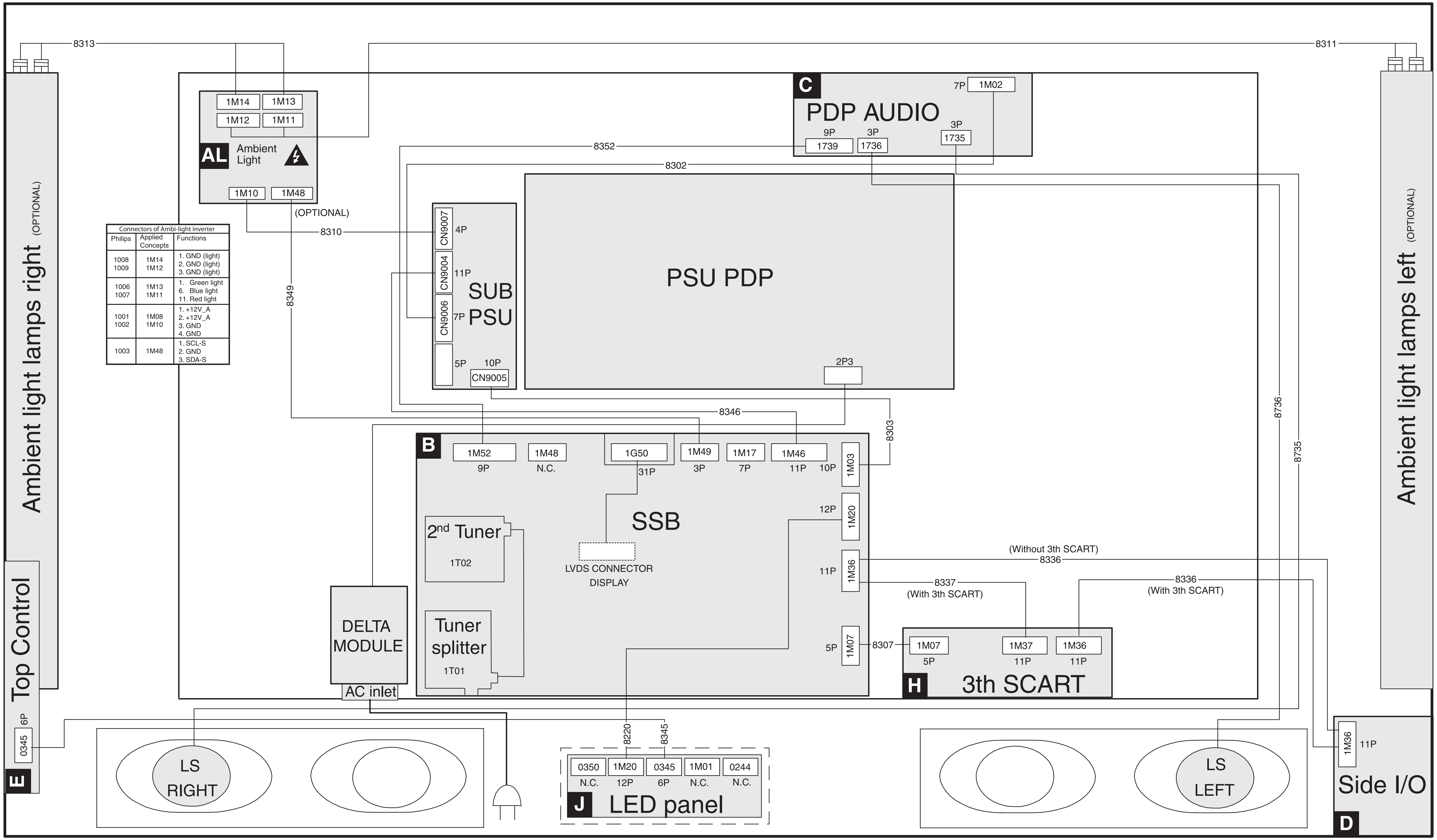
Wiring Diagram 42-50 Inch SDI Step

WIRING 42”, 50” SDI


8313
8311
Ambient light lamps right (OPTIONAL)
Ambient light lamps left (OPTIONAL)
1M14
1M13
1M12
1M11
AL
Ambient Light
1M10
1M48
(OPTIONAL)
8310
8349
C
PDP AUDIO
7P
1M02
9P
1739
3P
1736
3P
1735
8352
8302
CN9007
4P
CN9004
11P
CN9006
7P
SUB PSU
5P
10P
CN9005
PSU PDP
2P3
8346
8303
8736
8735
B
1M52
9P
1M48
N.C.
1G50
31P
1M49
3P
1M17
7P
1M46
11P
10P
1M03
12P
1M20
11P
1M36
5P
1M07
SSB
2nd Tuner
1T02
LVDS CONNECTOR DISPLAY
Tuner splitter
1T01
DELTA MODULE
AC inlet
(Without 3th SCART)
8336
8337
(With 3th SCART)
8336
(With 3th SCART)
8307
1M07
5P
1M37
11P
1M36
11P
H
3th SCART
Top Control
6P
0345
E
LS RIGHT
8220
8345
0350
N.C.
1M20
12P
0345
6P
1M01
N.C.
0244
N.C.
J
LED panel
LS LEFT
1M36
11P
Side I/O
D

Connectors of Ambi-light inverter		
Philips	Applied Concepts	Functions
1008 1009	1M14 1M12	1. GND (light) 2. GND (light) 3. GND (light)
1006 1007	1M13 1M11	1. Green light 6. Blue light 11. Red light
1001 1002	1M08 1M10	1. +12V_A 2. +12V_A 3. GND 4. GND
1003	1M48	1. SCL-S 2. GND 3. SDA-S

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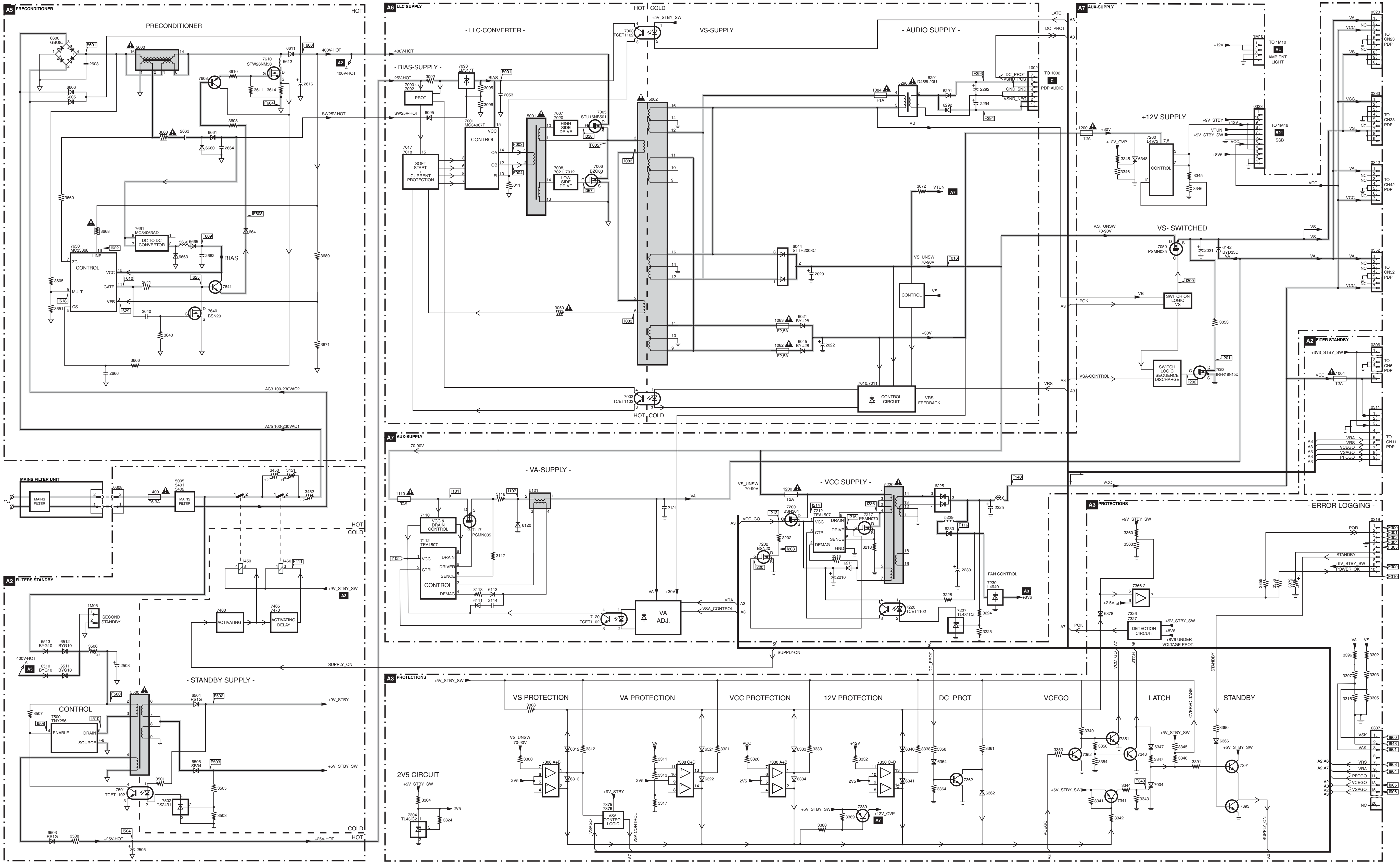
Block Diagram Supply 42 Inch FHP

SUPPLY 42" FHP


A5 PRECONDITIONER
PRECONDITIONER
HOT
A6 LLC SUPPLY
- LLC-CONVERTER -
- BIAS-SUPPLY -
VS-SUPPLY
- AUDIO SUPPLY -
HOT COLD
A7 AUX-SUPPLY
+12V SUPPLY
VS- SWITCHED
A2 FILTER STANDBY
A7 AUX-SUPPLY
- VA-SUPPLY -
- VCC SUPPLY -
MAINS FILTER UNIT
MAINS FILTER
A2 FILTERS STANDBY
- STANDBY SUPPLY -
CONTROL
A3 PROTECTIONS
- ERROR LOGGING -
VS PROTECTION
VA PROTECTION
VCC PROTECTION
12V PROTECTION
DC_PROT
VCEGO
LATCH
STANDBY
2V5 CIRCUIT
DC TO DC CONVERTOR
BIAS
SOFT START + CURRENT PROTECTION
PROT
HIGH SIDE DRIVE
LOW SIDE DRIVE
CONTROL CIRCUIT
SWITCH ON LOGIC VS
SWITCH LOGIC SEQUENCE DISCHARGE
VA ADJ.
ACTIVATING
ACTIVATING DELAY
VCC & DRAIN CONTROL
DETECTION CIRCUIT
VSA CONTROL LOGIC
FAN CONTROL
TO CN23 PDP
TO CN33 PDP
TO CN42 PDP
TO CN52 PDP
TO CN6 PDP
TO CN11 PDP
TO CN7 PDP
TO 1M10 AL AMBIENT LIGHT
TO 1M46 B21 SSB
TO 1M03 B21 SSB
TO 1002 C PDP AUDIO
SECOND STANDBY
AC3 100-230VAC2
AC5 100-230VAC1
400V-HOT
SW25V-HOT
SUPPLY_ON
+9V_STBY
+5V_STBY_SW
+25V-HOT

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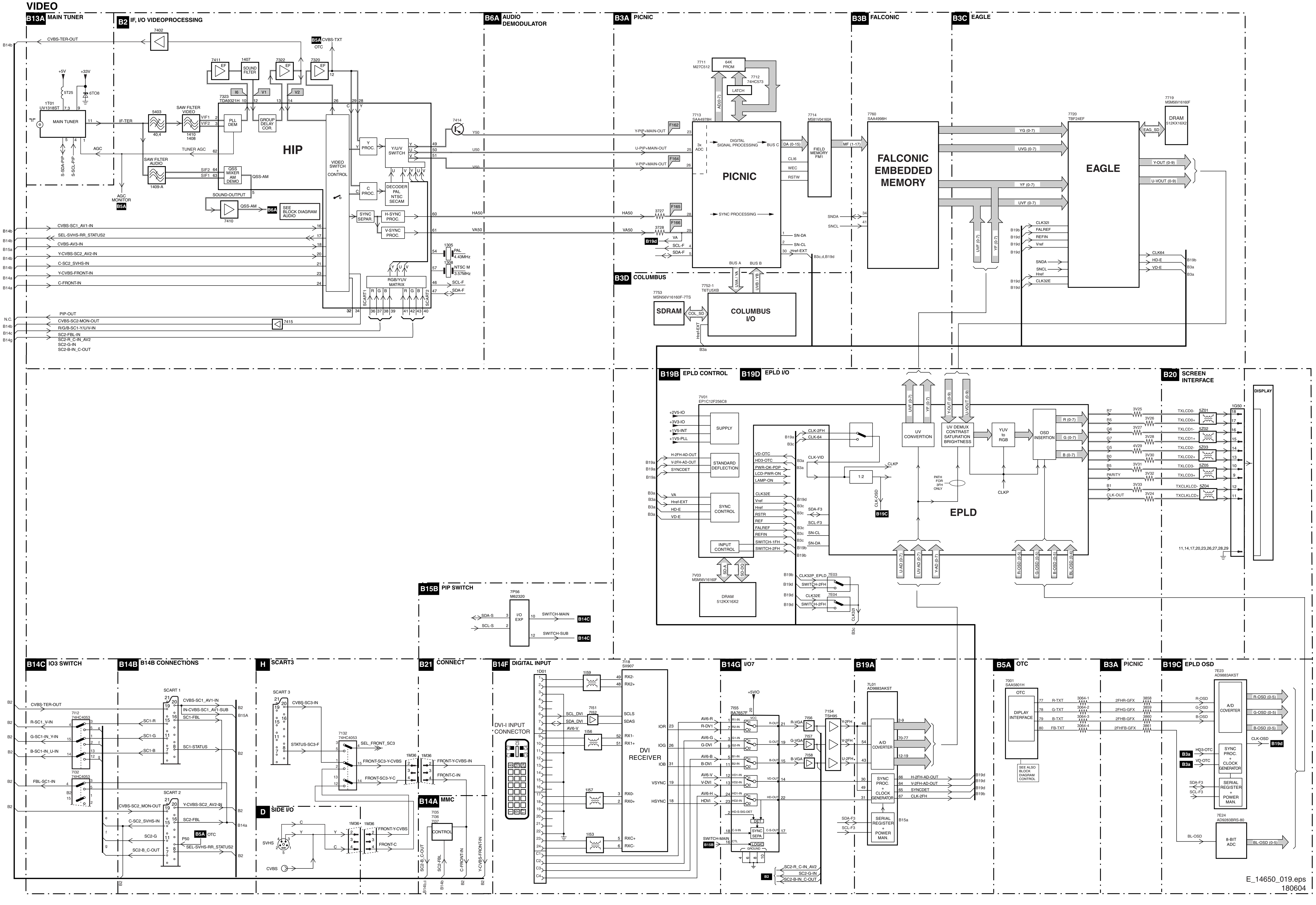
Block Diagram Video


VIDEO
B13A MAIN TUNER
B2 IF, I/O VIDEOPROCESSING
B6A AUDIO DEMODULATOR
B3A PICNIC
B3B FALCONIC
B3C EAGLE
B3D COLUMBUS
B19B EPLD CONTROL
B19D EPLD I/O
B20 SCREEN INTERFACE
B15B PIP SWITCH
B14C IO3 SWITCH
B14B B14B CONNECTIONS
H SCART3
B21 CONNECT
B14F DIGITAL INPUT
B14G I/O7
B19A
B5A OTC
B3A PICNIC
B19C EPLD OSD
D SIDE I/O
B14A MMC
MAIN TUNER
SAW FILTER VIDEO
SAW FILTER AUDIO
HIP
VIDEO SWITCH + CONTROL
Y/U/V SWITCH
DECODER PAL NTSC SECAM
RGB/YUV MATRIX
SYNC SEPAR.
H-SYNC PROC.
V-SYNC PROC.
QSS MIXER AM DEMO
PLL DEM
GROUP DELAY COR.
SOUND FILTER
SEE BLOCK DIAGRAM AUDIO
PICNIC
DIGITAL SIGNAL PROCESSING
SYNC PROCESSING
64K PROM
LATCH
FIELD MEMORY FM1
FALCONIC EMBEDDED MEMORY
EAGLE
DRAM 512KX16X2
SDRAM
COLUMBUS I/O
EPLD
SUPPLY
STANDARD DEFLECTION
SYNC CONTROL
INPUT CONTROL
DRAM 512KX16X2
UV CONVERTION
UV DEMUX CONTRAST SATURATION BRIGHTNESS
YUV to RGB
OSD INSERTION
DISPLAY
I/O EXP
SCART 1
SCART 2
SCART 3
DVI-I INPUT CONNECTOR
DVI RECEIVER
CONTROL
A/D CONVERTER
SYNC PROC. + CLOCK GENERATOR
SERIAL REGISTER + POWER MAN.
DIPLAY INTERFACE
SEE ALSO BLOCK DIAGRAM CONTROL
A/D COVERTER
SYNC PROC. + CLOCK GENERATOR
SERIAL REGISTER + POWER MAN.
8-BIT ADC
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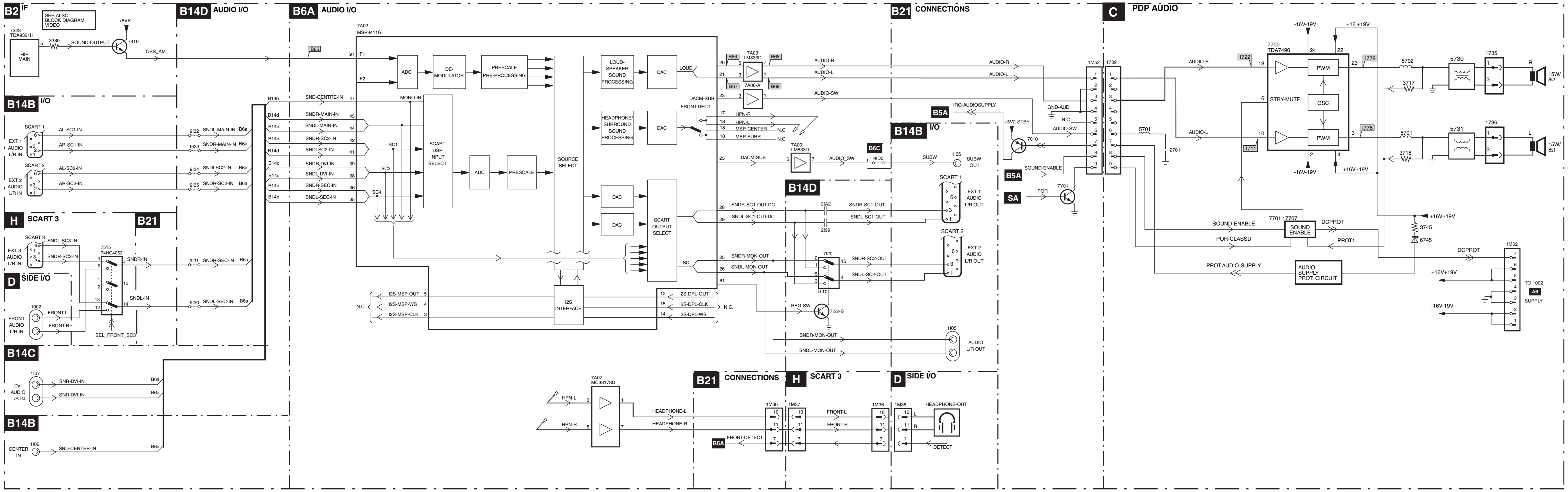
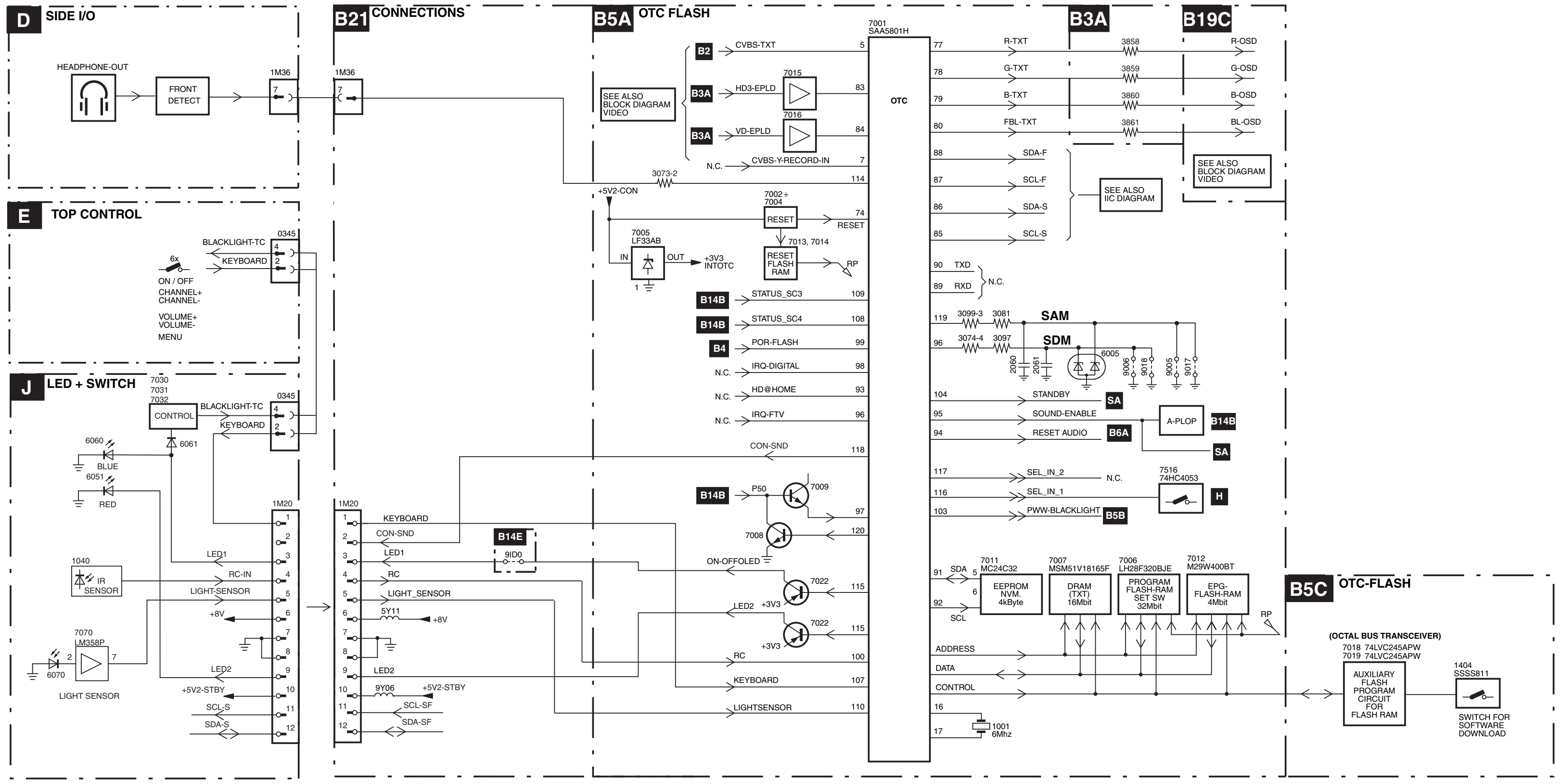
180604

Block Diagram Audio

AUDIO


B2 IF
SEE ALSO BLOCK DIAGRAM VIDEO
7323 TDA9321H
HIP MAIN
3380
SOUND-OUTPUT
+8VP
7410
QSS_AM
B14D AUDIO I/O
B6A AUDIO I/O
7A02 MSP3411G
IF1
IF2
ADC
DE-MODULATOR
PRESCALE PRE-PROCESSING
LOUD-SPEAKER SOUND PROCESSING
DAC
LOUD
HEADPHONE/ SURROUND SOUND PROCESSING
MONO-IN
SCART DSP INPUT SELECT
ADC
PRESCALE
SOURCE SELECT
DAC
SCART OUTPUT SELECT
I2S INTERFACE
SC1
SC3
SC4
SC
DACM-SUB
FRONT-DECT
B14B I/O
SCART 1
EXT 1 AUDIO L/R IN
AL-SC1-IN
AR-SC1-IN
SCART 2
EXT 2 AUDIO L/R IN
AL-SC2-IN
AR-SC2-IN
SND-CENTRE-IN
SNDR-MAIN-IN
SNDL-MAIN-IN
SNDR-SC2-IN
SNDLSC2-IN
SNDR-DVI-IN
SNDL-DVI-IN
SNDR-SEC-IN
SNDL-SEC-IN
H SCART 3
B21
SCART 3
EXT 3 AUDIO L/R IN
SNDL-SC3-IN
SNDR-SC3-IN
7515 74HC4053
SNDR-IN
SNDL-IN
D SIDE I/O
1002
FRONT AUDIO L/R IN
FRONT-L
FRONT-R
SEL_FRONT_SC3
B14C
1I07
DVI AUDIO L/R IN
SNR-DVI-IN
SND-DVI-IN
B14B
1I06
CENTER IN
SND-CENTER-IN
I2S-MSP-OUT
I2S-MSP-WS
I2S-MSP-CLK
I2S-DPL-OUT
I2S-DPL-CLK
I2S-DPL-WS
N.C.
7A03 LM833D
7A00-A
AUDIO-R
AUDIO-L
AUDIO-SW
HPN-R
HPN-L
MSP-CENTER
MSP-SURR
7A00 LM833D
AUDIO_SW
B6C
SUBW
1I06
SUBW OUT
B14D
SNDR-SC1-OUT-DC
SNDL-SC1-OUT-DC
2IA2
2I99
SNDR-SC1-OUT
SNDL-SC1-OUT
SCART 1
EXT 1 AUDIO L/R OUT
SCART 2
EXT 2 AUDIO L/R OUT
SNDR-MON-OUT
SNDL-MON-OUT
7120
SNDR-SC2-OUT
SNDL-SC2-OUT
REG-SW
7122-B
1I05
AUDIO L/R OUT
7A07 MC33178D
HPN-L
HPN-R
B21 CONNECTIONS
HEADPHONE-L
HEADPHONE-R
FRONT-DETECT
B5A
1M36
1M37
H SCART 3
FRONT-L
FRONT-R
D SIDE I/O
HEADPHONE-OUT
DETECT
B21 CONNECTIONS
B5A
IRQ-AUDIOSUPPLY
+5V2-STBY
7010
SOUND-ENABLE
SA
POR
7Y01
1M52
1739
GND-AUD
N.C.
AUDIO-SW
5701
2701
C PDP AUDIO
-16V-19V
+16 +19V
7700 TDA7490
PWM
OSC
STBY-MUTE
5702
5730
1735
3717
5701
5731
1736
3718
15W/ 8Ω
R
L
+16V+19V
7701 : 7707
SOUND ENABLE
SOUND-ENABLE
POR-CLASSD
DCPROT
PROT1
PROT-AUDIO-SUPPLY
AUDIO SUPPLY PROT. CIRCUIT
3745
6745
1M02
TO 1002
A6
SUPPLY

CONTROLS


D SIDE I/O
HEADPHONE-OUT
FRONT DETECT
1M36
B21 CONNECTIONS
B5A OTC FLASH
7001 SAA5801H
OTC
B2
CVBS-TXT
B3A
HD3-EPLD
7015
VD-EPLD
7016
SEE ALSO BLOCK DIAGRAM VIDEO
CVBS-Y-RECORD-IN
3073-2
+5V2-CON
7002 ÷ 7004
RESET
7013, 7014
RESET FLASH RAM
RP
7005 LF33AB
+3V3 INTOTC
B14B
STATUS_SC3
STATUS_SC4
B4
POR-FLASH
IRQ-DIGITAL
HD@HOME
IRQ-FTV
CON-SND
P50
7009
7008
ON-OFFOLED
7022
LED2
+3V3
RC
KEYBOARD
LIGHTSENSOR
B3A
B19C
R-TXT
G-TXT
B-TXT
FBL-TXT
3858
3859
3860
3861
R-OSD
G-OSD
B-OSD
BL-OSD
SEE ALSO BLOCK DIAGRAM VIDEO
SDA-F
SCL-F
SDA-S
SCL-S
SEE ALSO IIC DIAGRAM
TXD
RXD
SAM
SDM
STANDBY
SOUND-ENABLE
RESET AUDIO
A-PLOP
SEL_IN_2
SEL_IN_1
7516 74HC4053
PWM-BLACKLIGHT
B5B
7011 MC24C32
EEPROM NVM. 4kByte
7007 MSM51V18165F
DRAM (TXT) 16Mbit
7006 LH28F320BJE
PROGRAM FLASH-RAM SET SW 32Mbit
7012 M29W400BT
EPG-FLASH-RAM 4Mbit
ADDRESS
DATA
CONTROL
1001 6Mhz
B5C OTC-FLASH
(OCTAL BUS TRANSCEIVER)
7018 74LVC245APW
7019 74LVC245APW
AUXILIARY FLASH PROGRAM CIRCUIT FOR FLASH RAM
1404 SSSS811
SWITCH FOR SOFTWARE DOWNLOAD
E TOP CONTROL
BLACKLIGHT-TC
KEYBOARD
0345
6x
ON / OFF
CHANNEL+
CHANNEL-
VOLUME+
VOLUME-
MENU
J LED + SWITCH
7030 7031 7032
CONTROL
6060
BLUE
6051
RED
6061
1040
IR SENSOR
RC-IN
LIGHT-SENSOR
7070 LM358P
6070
LIGHT SENSOR
+5V2-STBY
SCL-S
SDA-S
1M20
CON-SND
LED1
LED2
B14E
9ID0
5Y11
9Y06
SCL-SF
SDA-SF

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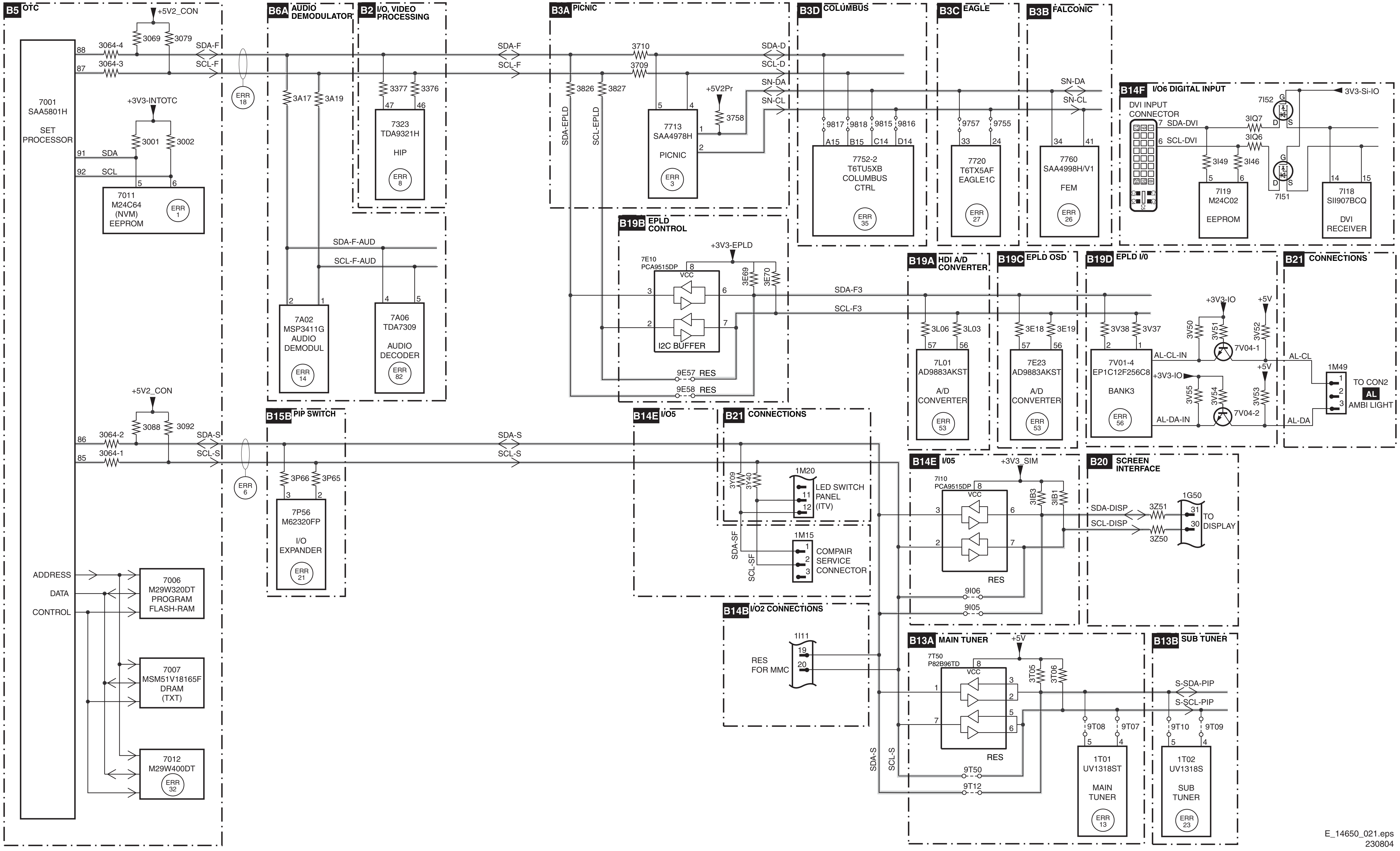
271204

I^{2}C IC's overview

IIC


B5 OTC
+5V2_CON
3069
3079
3064-4
3064-3
88
87
SDA-F
SCL-F
ERR 18
7001
SAA5801H
SET PROCESSOR
+3V3-INTOTC
3001
3002
91 SDA
92 SCL
7011
M24C64
(NVM)
EEPROM
ERR 1
+5V2_CON
3088
3092
86
85
3064-2
3064-1
SDA-S
SCL-S
ERR 6
ADDRESS
DATA
CONTROL
7006
M29W320DT
PROGRAM
FLASH-RAM
7007
MSM51V18165F
DRAM
(TXT)
7012
M29W400DT
ERR 32
B6A AUDIO DEMODULATOR
3A17
3A19
SDA-F-AUD
SCL-F-AUD
7A02
MSP3411G
AUDIO
DEMODUL
ERR 14
B2 I/O, VIDEO PROCESSING
3377
3376
7323
TDA9321H
HIP
ERR 8
7A06
TDA7309
AUDIO
DECODER
ERR 82
B15B PIP SWITCH
3P66
3P65
7P56
M62320FP
I/O
EXPANDER
ERR 21
B3A PICNIC
SDA-F
SCL-F
3710
3709
SDA-D
SCL-D
SN-DA
SN-CL
3826
3827
SDA-EPLD
SCL-EPLD
+5V2Pr
3758
7713
SAA4978H
PICNIC
ERR 3
B19B EPLD CONTROL
+3V3-EPLD
7E10
PCA9515DP
VCC
3E69
3E70
I2C BUFFER
9E57 RES
9E58 RES
SDA-F3
SCL-F3
B3D COLUMBUS
9817
9818
9815
9816
A15
B15
C14
D14
7752-2
T6TU5XB
COLUMBUS
CTRL
ERR 35
B3C EAGLE
9757
9755
7720
T6TX5AF
EAGLE1C
ERR 27
B3B FALCONIC
SN-DA
SN-CL
7760
SAA4998H/V1
FEM
ERR 26
B14F I/O6 DIGITAL INPUT
DVI INPUT CONNECTOR
SDA-DVI
SCL-DVI
3IQ7
3IQ6
3I49
3I46
7I52
7I51
3V3-Si-IO
7I19
M24C02
EEPROM
7I18
SII907BCQ
DVI
RECEIVER
B19A HDI A/D CONVERTER
3L06
3L03
7L01
AD9883AKST
A/D
CONVERTER
ERR 53
B19C EPLD OSD
3E18
3E19
7E23
AD9883AKST
A/D
CONVERTER
ERR 53
B19D EPLD I/0
3V38
3V37
7V01-4
EP1C12F256C8
BANK3
ERR 56
+3V3-IO
+5V
3V50
3V51
3V52
7V04-1
AL-CL-IN
+3V3-IO
3V55
3V54
3V53
7V04-2
AL-DA-IN
B21 CONNECTIONS
AL-CL
AL-DA
1M49
TO CON2
AL
AMBI LIGHT
B14E I/O5
B21 CONNECTIONS
3Y09
3Y40
1M20
LED SWITCH PANEL (ITV)
SDA-SF
SCL-SF
1M15
COMPAIR SERVICE CONNECTOR
B14E I/05
+3V3_SIM
7I10
PCA9515DP
VCC
3IB3
3IB1
RES
9I06
9I05
B20 SCREEN INTERFACE
SDA-DISP
SCL-DISP
3Z51
3Z50
1G50
TO DISPLAY
B14B I/O2 CONNECTIONS
1I11
RES FOR MMC
SDA-S
SCL-S
B13A MAIN TUNER
+5V
7T50
P82B96TD
VCC
3T05
3T06
RES
9T50
9T12
9T08
9T07
1T01
UV1318ST
MAIN TUNER
ERR 13
B13B SUB TUNER
S-SDA-PIP
S-SCL-PIP
9T10
9T09
1T02
UV1318S
SUB TUNER
ERR 23
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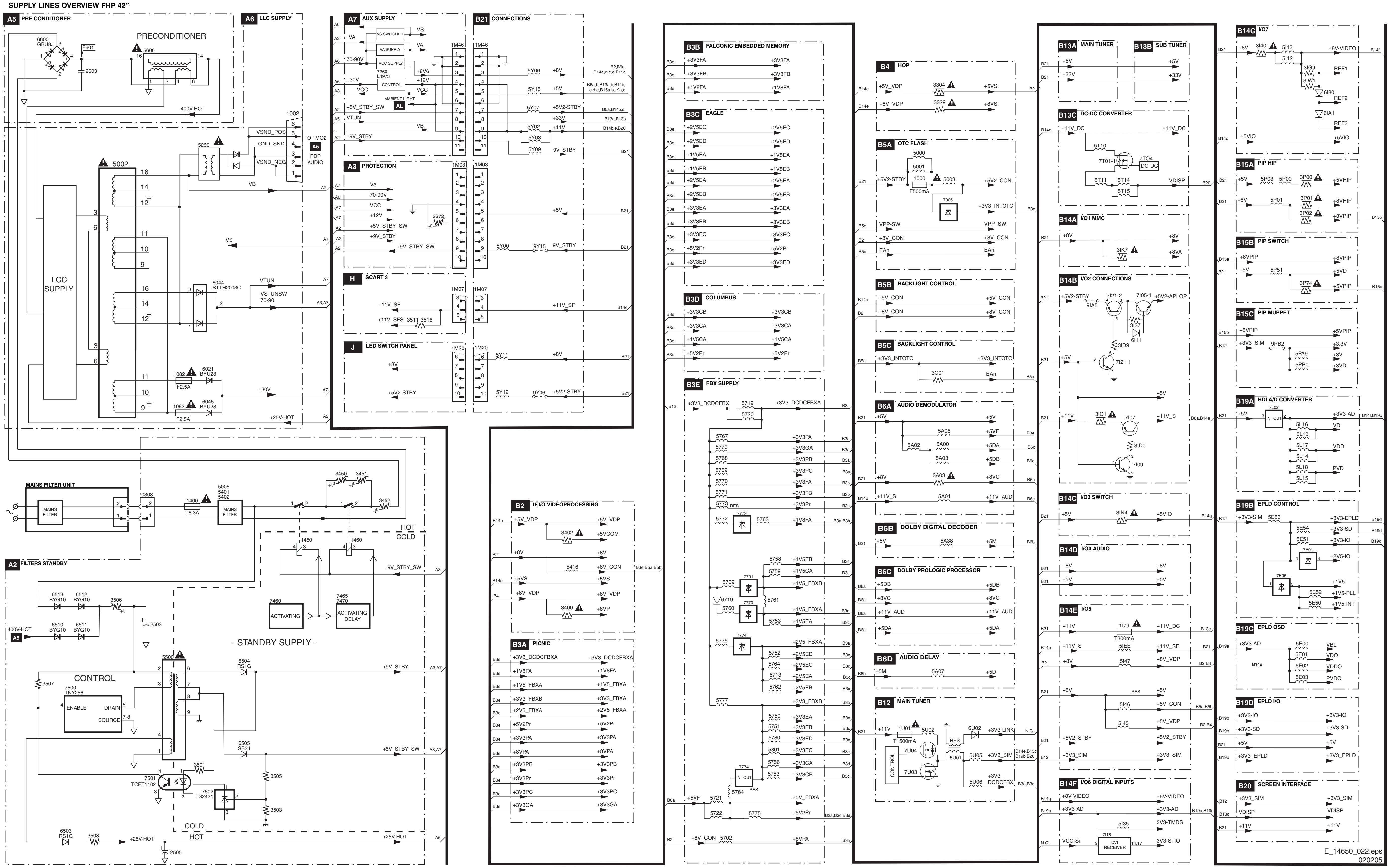
Supply Lines Overview FHP


SUPPLY LINES OVERVIEW FHP 42"
A5 PRE CONDITIONER
PRECONDITIONER
A6 LLC SUPPLY
LCC SUPPLY
A7 AUX SUPPLY
B21 CONNECTIONS
A3 PROTECTION
H SCART 3
J LED SWITCH PANEL
MAINS FILTER UNIT
MAINS FILTER
A2 FILTERS STANDBY
CONTROL
ACTIVATING
ACTIVATING DELAY
- STANDBY SUPPLY -
HOT
COLD
B2 IF, I/O VIDEOPROCESSING
B3A PICNIC
B3B FALCONIC EMBEDDED MEMORY
B3C EAGLE
B3D COLUMBUS
B3E FBX SUPPLY
B4 HOP
B5A OTC FLASH
B5B BACKLIGHT CONTROL
B5C BACKLIGHT CONTROL
B6A AUDIO DEMODULATOR
B6B DOLBY DIGITAL DECODER
B6C DOLBY PROLOGIC PROCESSOR
B6D AUDIO DELAY
B12 MAIN TUNER
B13A MAIN TUNER
B13B SUB TUNER
B13C DC-DC CONVERTER
B14A I/O1 MMC
B14B I/O2 CONNECTIONS
B14C I/O3 SWITCH
B14D I/O4 AUDIO
B14E I/O5
B14F I/O6 DIGITAL INPUTS
B14G I/O7
B15A PIP HIP
B15B PIP SWITCH
B15C PIP MUPPET
B19A HDI A/D CONVERTER
B19B EPLD CONTROL
B19C EPLD OSD
B19D EPLD I/O
B20 SCREEN INTERFACE
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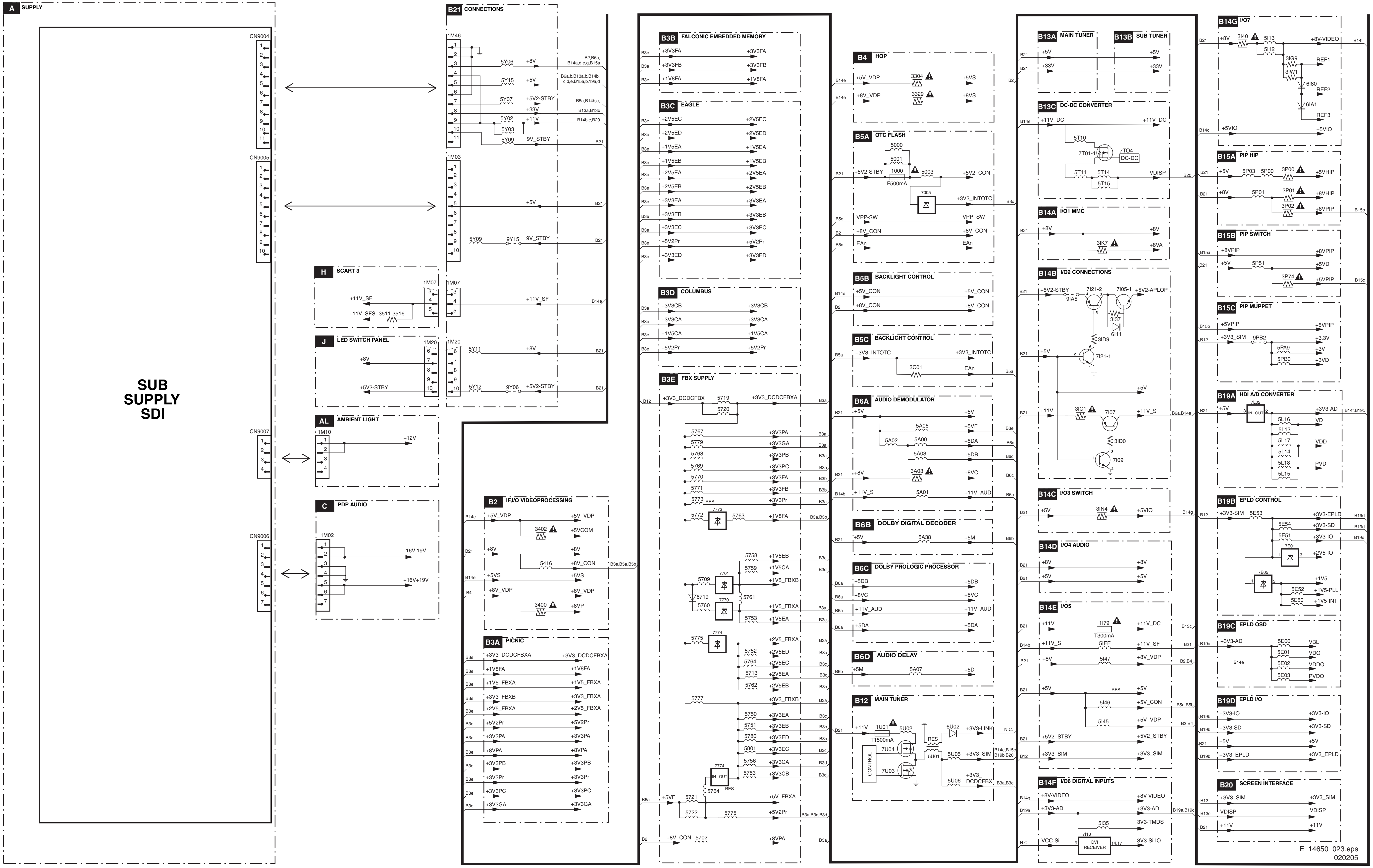
020205

Supply Lines Overview SDI

SUPPLY LINES OVERVIEW SDI 42” / 50”


A SUPPLY
SUB SUPPLY SDI
CN9004
CN9005
CN9007
CN9006
B21 CONNECTIONS
1M46
5Y06 +8V
5Y15 +5V
5Y07 +5V2-STBY
+33V
5Y02 +11V
5Y03
5Y09 9V_STBY
1M03
+5V
5Y09 9Y15 9V_STBY
H SCART 3
1M07
+11V_SF
+11V_SFS 3511-3516
J LED SWITCH PANEL
1M20
+8V
5Y11 +8V
+5V2-STBY
5Y12 9Y06 +5V2-STBY
AL AMBIENT LIGHT
1M10
+12V
C PDP AUDIO
1M02
-16V-19V
+16V+19V
B2 IF,I/O VIDEOPROCESSING
+5V_VDP
3402 +5VCOM
+8V
5416 +8V_CON
+5VS
+8V_VDP
3400 +8VP
B3A PICNIC
+3V3_DCDCFBXA
+1V8FA
+1V5_FBXA
+3V3_FBXB
+2V5_FBXA
+5V2Pr
+3V3PA
+8VPA
+3V3PB
+3V3Pr
+3V3PC
+3V3GA
B3B FALCONIC EMBEDDED MEMORY
+3V3FA
+3V3FB
+1V8FA
B3C EAGLE
+2V5EC
+2V5ED
+1V5EA
+1V5EB
+2V5EA
+2V5EB
+3V3EA
+3V3EB
+3V3EC
+5V2Pr
+3V3ED
B3D COLUMBUS
+3V3CB
+3V3CA
+1V5CA
+5V2Pr
B3E FBX SUPPLY
+3V3_DCDCFBX 5719 +3V3_DCDCFBXA
5720
5767 +3V3PA
5779 +3V3GA
5768 +3V3PB
5769 +3V3PC
5770 +3V3FA
5771 +3V3FB
5773 RES +3V3Pr
5772 7773 5763 +1V8FA
5758 +1V5EB
5759 +1V5CA
5709 7701 +1V5_FBXB
6719 5761
5760 7770 +1V5_FBXA
5753 +1V5EA
5775 7774 +2V5_FBXA
5752 +2V5ED
5764 +2V5EC
5713 +2V5EA
5762 +2V5EB
5777 +3V3_FBXB
5750 +3V3EA
5751 +3V3EB
5780 +3V3ED
5801 +3V3EC
5756 +3V3CA
5753 +3V3CB
7774 IN OUT
5764 RES
+5VF 5721 +5V_FBXA
5722 5775 +5V2Pr
+8V_CON 5702 +8VPA
B4 HOP
+5V_VDP 3304 +5VS
+8V_VDP 3329 +8VS
B5A OTC FLASH
5000
5001
+5V2-STBY 1000 5003 +5V2_CON
F500mA
7005 +3V3_INTOTC
VPP-SW VPP_SW
+8V_CON +8V_CON
EAn EAn
B5B BACKLIGHT CONTROL
+5V_CON
+8V_CON
B5C BACKLIGHT CONTROL
+3V3_INTOTC
3C01 EAn
B6A AUDIO DEMODULATOR
+5V
5A06 +5VF
5A02 5A00 +5DA
5A03 +5DB
+8V 3A03 +8VC
+11V_S 5A01 +11V_AUD
B6B DOLBY DIGITAL DECODER
+5V 5A38 +5M
B6C DOLBY PROLOGIC PROCESSOR
+5DB
+8VC
+11V_AUD
+5DA
B6D AUDIO DELAY
+5M 5A07 +5D
B12 MAIN TUNER
+11V 1U01 5U02
T1500mA
7U04
7U03
CONTROL
RES
6U02 +3V3-LINK N.C.
5U01
5U05 +3V3_SIM
5U06 +3V3_DCDCFBX
B13A MAIN TUNER
+5V
+33V
B13B SUB TUNER
+5V
+33V
B13C DC-DC CONVERTER
+11V_DC
5T10
7T01-1
7T04 DC-DC
5T11 5T14 VDISP
5T15
B14A I/O1 MMC
+8V
3IK7 +8VA
B14B I/O2 CONNECTIONS
+5V2-STBY 7I21-2 7I05-1 +5V2-APLOP
9IA5
3I37
6I11
3ID9
+5V 7I21-1
+5V
+11V 3IC1 7I07 +11V_S
3ID0
7I09
B14C I/O3 SWITCH
+5V 3IN4 +5VIO
B14D I/O4 AUDIO
+8V
+5V
B14E I/O5
+11V 1I79 +11V_DC
T300mA
+11V_S 5IEE +11V_SF
+8V 5I47 +8V_VDP
+5V RES +5V
5I46 +5V_CON
5I45 +5V_VDP
+5V2_STBY
+3V3_SIM
B14F I/O6 DIGITAL INPUTS
+8V-VIDEO
+3V3-AD
5I35 3V3-TMDS
VCC-Si 7I18 DVI RECEIVER 3V3-Si-IO
B14G I/O7
+8V 3I40 5I13 +8V-VIDEO
5I12
3IG9 REF1
3IW1
6I80 REF2
6IA1
REF3
+5VIO +5VIO
B15A PIP HIP
+5V 5P03 5P00 3P00 +5VHIP
+8V 5P01 3P01 +8VHIP
3P02 +8VPIP
B15B PIP SWITCH
+8VPIP
+5V 5P51 +5VD
3P74 +5VPIP
B15C PIP MUPPET
+5VPIP
+3V3_SIM 9PB2 +3.3V
5PA9 +3V
5PB0 +3VD
B19A HDI A/D CONVERTER
+5V 7L02 +3V3-AD
5L16 VD
5L13
5L17 VDD
5L14
5L18 PVD
5L15
B19B EPLD CONTROL
+3V3-SIM 5E53 +3V3-EPLD
5E54 +3V3-SD
5E51 +3V3-IO
7E01 +2V5-IO
7E05 +1V5
5E52 +1V5-PLL
5E50 +1V5-INT
B19C EPLD OSD
+3V3-AD 5E00 VBL
5E01 VDO
5E02 VDDO
5E03 PVDO
B19D EPLD I/O
+3V3-IO
+3V3-SD
+5V
+3V3_EPLD
B20 SCREEN INTERFACE
+3V3_SIM
VDISP
+11V
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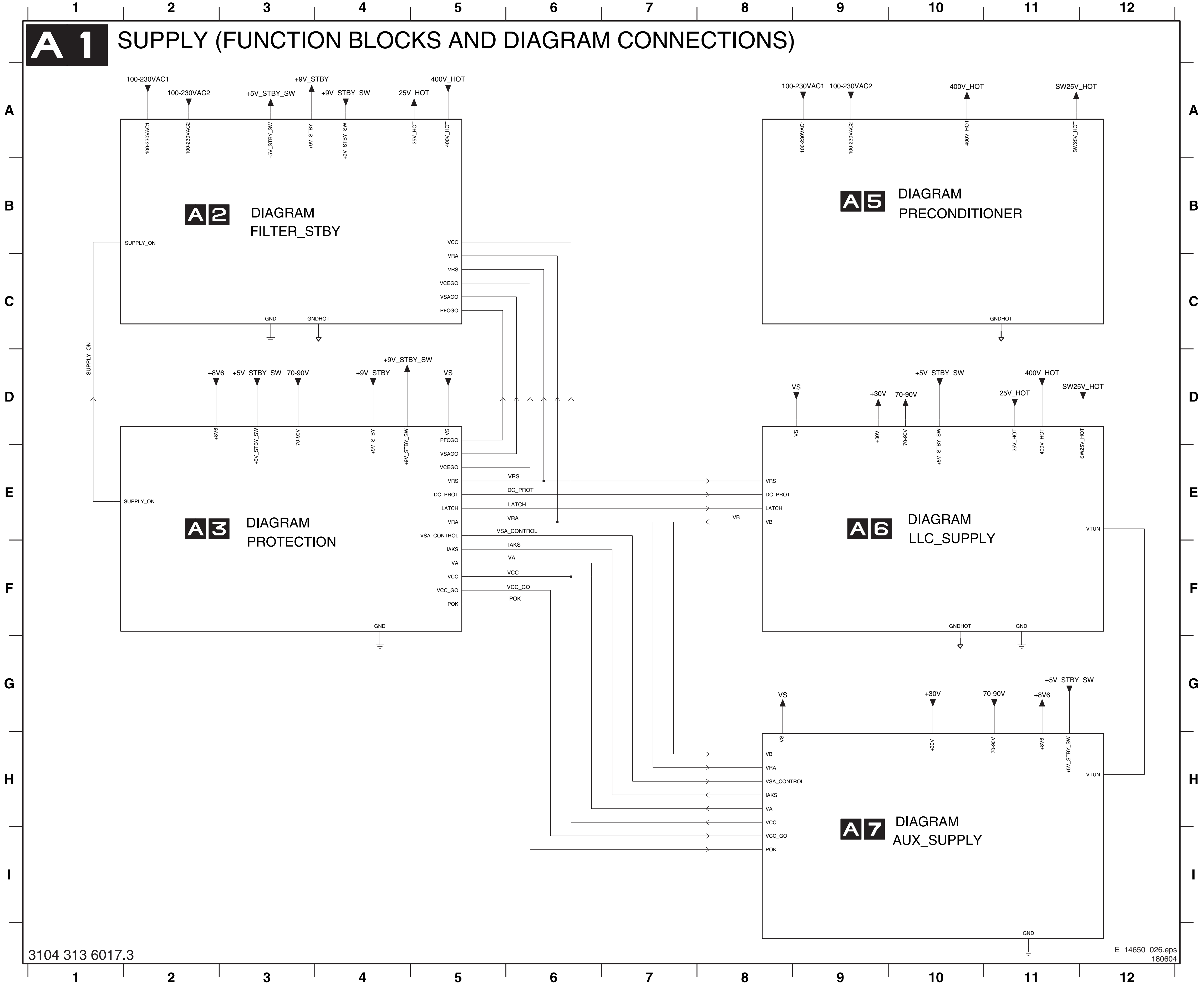
7. Circuit Diagrams and PWB Layouts

PSU (FHP 42”): Supply


A1
SUPPLY (FUNCTION BLOCKS AND DIAGRAM CONNECTIONS)
A2 DIAGRAM FILTER_STBY
A3 DIAGRAM PROTECTION
A5 DIAGRAM PRECONDITIONER
A6 DIAGRAM LLC_SUPPLY
A7 DIAGRAM AUX_SUPPLY
100-230VAC1
100-230VAC2
+5V_STBY_SW
+9V_STBY
+9V_STBY_SW
25V_HOT
400V_HOT
SW25V_HOT
SUPPLY_ON
VCC
VRA
VRS
VCEGO
VSAGO
PFCGO
GND
GNDHOT
+8V6
70-90V
VS
+30V
DC_PROT
LATCH
VB
VSA_CONTROL
IAKS
VA
VCC_GO
POK
VTUN
1 2 3 4 5 6 7 8 9 10 11 12
A B C D E F G H I
3104 313 6017.3
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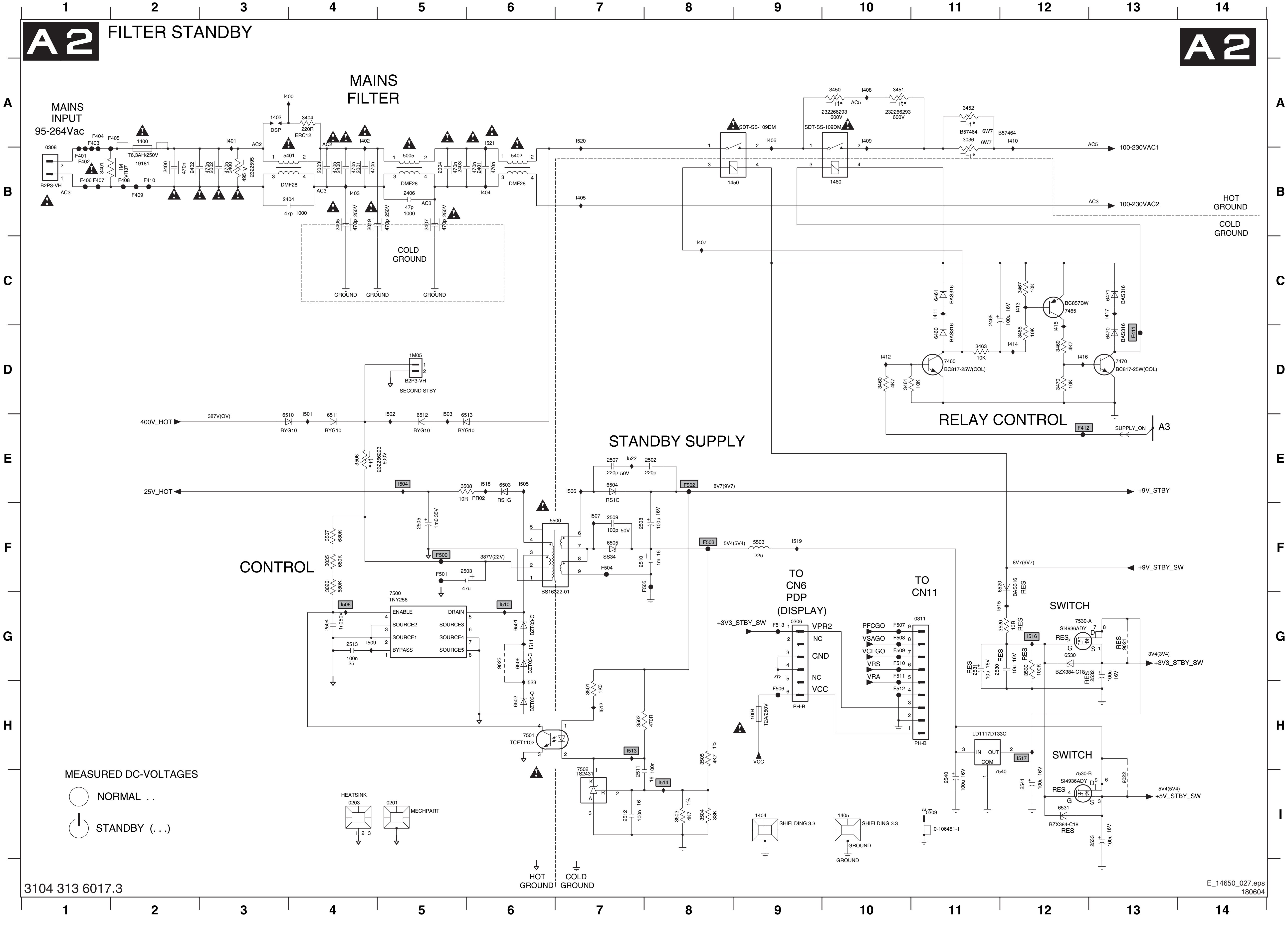
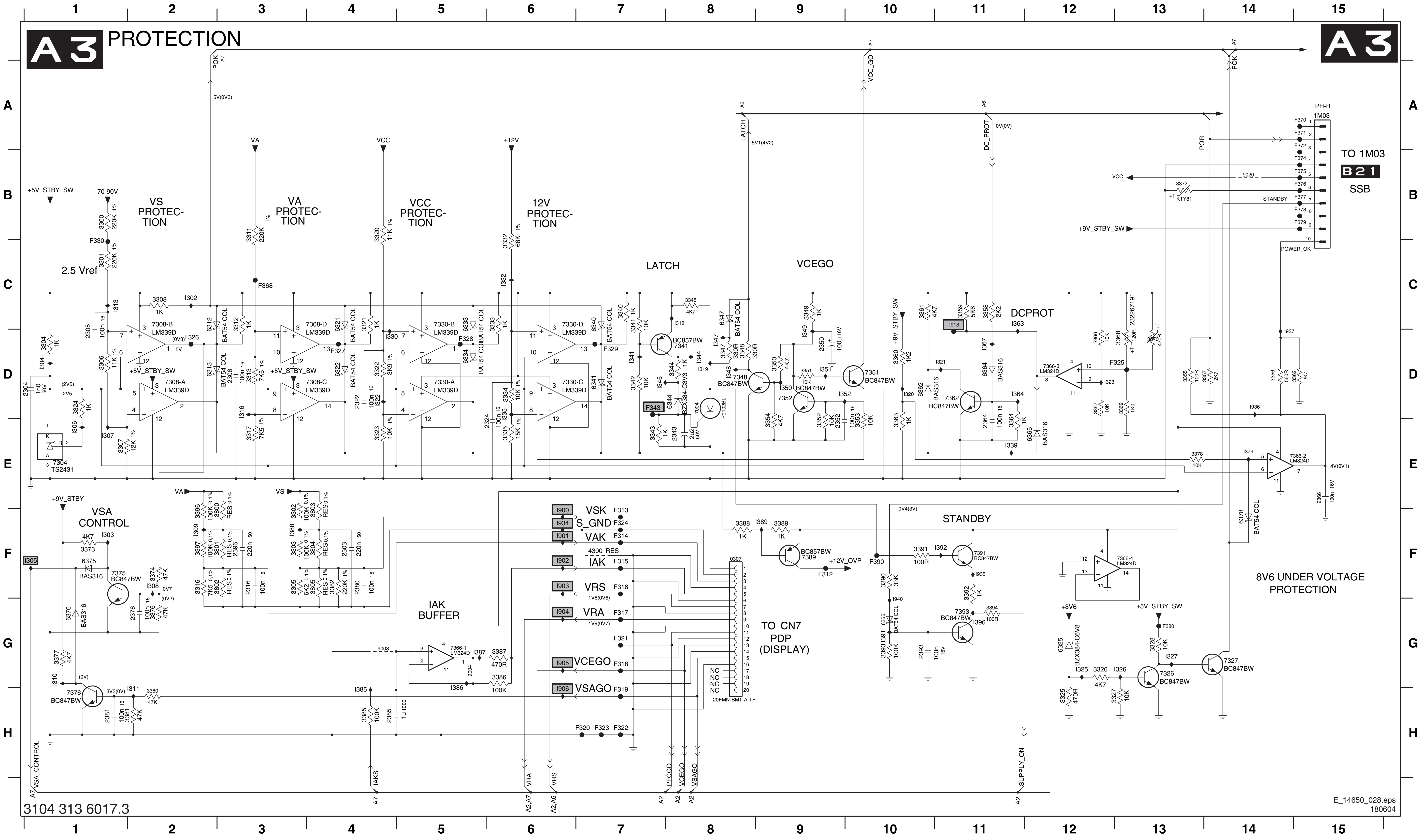
PSU (FHP 42”): Filter Standby


A2
FILTER STANDBY
MAINS INPUT 95-264Vac
MAINS FILTER
B2P3-VH
0308
AC3
F401
F402
F403
F404
F405
F406
F407
F408
F409
F410
1400 T6,3AH/250V 19181
3401 1M VR37
2400 470n
2402 470n
2001 470n
3400 470n
495 V 2322595
I401
AC2
I400
1402 DSP
3404 220R ERC12
5401 DMF28
2003 470n
2008 470n
2201 470n
I402
I403
2404 47p 1000
2405 470p 250V
2019 470p 250V
5005 DMF28
2406 47p 1000
2407 470p 250V
2004 470n
2403 470n
2401 470n
I404
I521
5402 DMF28
COLD GROUND
GROUND
I520
I405
1450 SDT-SS-109DM
1460 SDT-SS-109DM
I406
I407
3450 232266293 600V
I408
AC5
3451 232266293 600V
I409
3452 B57464 6W7
3036 B57464 6W7
I410
100-230VAC1
100-230VAC2
HOT GROUND
COLD GROUND
6461 BAS316
6460 BAS316
I411
2465 100u 16V
3467 10K
I413
7465 BC857BW
I415
3465 10K
I414
3463 10K
I412
7460 BC817-25W(COL)
3460 4K7
3461 10K
3469 4K7
I416
3470 10K
6471 BAS316
6470 BAS316
I417
F411
7470 BC817-25W(COL)
RELAY CONTROL
F412
SUPPLY_ON
A3
1M05 B2P3-VH SECOND STBY
400V_HOT
387V(OV)
6510 BYG10
I501
6511 BYG10
I502
6512 BYG10
I503
6513 BYG10
3506 232266293 600V
STANDBY SUPPLY
25V_HOT
I504
3508 10R PR02
I518
6503 RS1G
I505
I506
2507 220p 50V
I522
2502 220p
6504 RS1G
F502
8V7(9V7)
+9V_STBY
2505 1m0 35V
F500
5500 BS16322-01
387V(22V)
F501
2503 47u
I507
2509 100p 50V
2508 100u 16V
6505 SS34
F504
2510 1m 16
F505
F503
5V4(5V4)
5503 22u
I519
3507 680K
3035 680K
3026 680K
CONTROL
I508
2504 1n0 50V
7500 TNY256
ENABLE
SOURCE2
SOURCE1
BYPASS
DRAIN
SOURCE3
SOURCE4
SOURCE5
2513 100n 25
I509
I510
6501 BZT03-C
I511
9023
6506 BZT03-C
I523
6502 BZT03-C
3501 1K0
I512
7501 TCET1102
I513
7502 TS2431
2511 100n 16
I514
3502 470R
3505 4K7 1%
3503 4K7 1%
3504 33K
2512 100n 16
TO CN6 PDP (DISPLAY)
+3V3_STBY_SW
F513
0306
VPR2
NC
GND
NC
VCC
F506
PH-B
1004 T2A/250V
VCC
TO CN11
0311
PFCGO
VSAGO
VCEGO
VRS
VRA
F507
F508
F509
F510
F511
F512
PH-B
8V7(9V7)
+9V_STBY_SW
6520 BAS316 RES
I515
3520 10R RES
SWITCH
7530-A SI4936ADY
I516
2531 10u 16V RES
2530 10u 16V RES
3530 100K RES
6530 BZX384-C18
2532 100u 16V RES
9021 RES
3V4(3V4)
+3V3_STBY_SW
7540 LD1117DT33C
IN
OUT
COM
I517
2540 100u 16V
2541 100u 16V
SWITCH
7530-B SI4936ADY
RES
6531 BZX384-C18 RES
9022
5V4(5V4)
+5V_STBY_SW
2533 100u 16V
MEASURED DC-VOLTAGES
NORMAL . .
STANDBY (. .)
HEATSINK 0203
0201 MECHPART
1404 SHIELDING 3.3
1405 SHIELDING 3.3
GROUND
0309 0-106451-1
HOT GROUND
COLD GROUND
3104 313 6017.3
E_14650_027.eps 180604

0201	I5
0203	I4
0306	G9
0308	A1
0309	I11
0311	G11
1004	H9
1400	A2
1402	A3
1404	I9
1405	I10
1450	B9
1460	B10
1M05	D5
2001	B4
2002	B3
2003	B4
2004	B5
2019	B4
2400	B2
2401	B6
2402	B2
2403	B5
2404	B4
2405	B4
2406	B5
2407	B5
2408	B4
2465	C11
2502	E8
2503	F6
2504	G4
2505	F5
2507	E7
2508	F7
2509	F7
2510	F7
2511	I7
2512	I7
2513	G4
2530	G11
2531	G11
2532	G13
2533	I13
2540	I11
2541	I12
3026	F4
3035	F4
3036	A11
3400	B3
3401	B1
3404	A4
3450	A10
3451	A10
3452	A11
3460	D10
3461	D10
3463	D11
3465	D12
3467	C12
3469	D12
3470	D12
3501	H7
3502	H7
3503	I8
3504	I8
3505	H8
3506	E4
3507	F4
3508	E6
3520	G12
3530	G12
5005	B5
5401	B4
5402	B6
5500	F7
5503	F9
6460	D11
6461	C11
6470	D13
6471	C13
6501	G6
6502	H6
6503	E6
6504	E7
6505	F7
6506	G6
6510	E3
6511	E4
6512	E5
6513	E6
6520	F12
6530	G12
6531	I12
7460	D11
7465	C12
7470	D13
7500	F5
7501	H6
7502	H7
7530-A	G12
7530-B	I12
7540	I12
9021	G13
9022	I13
9023	G6
F401	B1
F402	B1
F403	A1
F404	A1
F405	A2
F406	B1
F407	B1
F408	B2
F409	B2
F410	B2
F411	D13
F412	E12
F500	F5
F501	F5
F502	E8
F503	F8
F504	F7
F505	F8
F506	H9
F507	G10
F508	G10
F509	G10
F510	G10
F511	G10
F512	H10
F513	G9
I400	A4
I401	A3
I402	A4
I403	B4
I404	B6
I405	B7
I406	A9
I407	C8
I408	A10
I409	A10
I410	A12
I411	C11
I412	D10
I413	C12
I414	D12
I415	D12
I416	D12
I417	C13
I501	D4
I502	D5
I503	D5
I504	E5
I505	E6
I506	E7
I507	F7
I508	G4
I509	G4
I510	G6
I511	G6
I512	H7
I513	H7
I514	I8
I515	G11
I516	G12
I517	H12
I518	E6
I519	F9
I520	A7
I521	A6
I522	E7
I523	H6

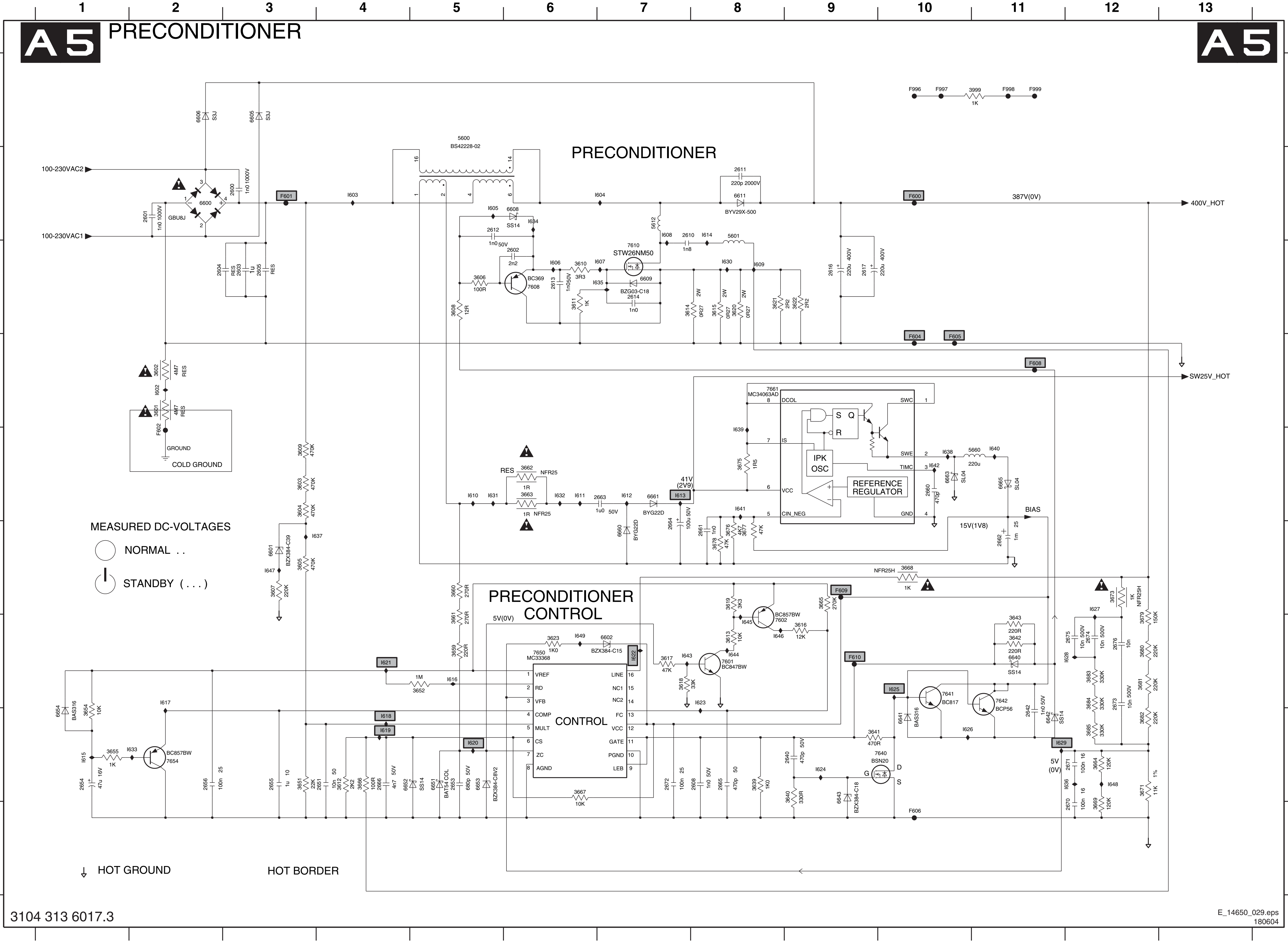
PSU (FHP 42”): Protection

0307 F8
1M03 A15
2303 F4
2304 D1
2305 D1
2306 D3
2316 F3
2322 D4
2324 E6
2343 E8
2350 D9
2352 E9
2364 E11
2366 E15
2376 G2
2380 F4
2381 H1
2385 H4
2393 G10
2396 F3
3300 B1
3301 C1
3302 F3
3303 F3
3304 D1
3305 F3
3306 D1
3307 E1
3308 C2
3311 B3
3312 C3
3313 D3
3316 F2
3317 E3
3320 B4
3321 C4
3322 D4
3323 E4
3324 D1
3325 H12
3326 G12
3327 H13
3328 G13
3332 C6
3333 C6
3334 D6
3335 E6
3340 C7
3341 C7
3342 D7
3343 E7
3344 D8
3345 C8
3347 D8
3348 D8
3349 C9
3350 D9
3351 D9
3352 E9
3353 E10
3354 E9
3355 D13
3356 D14
3357 D14
3358 C11
3359 C11
3360 D10
3361 C10
3362 D15
3363 E10
3364 E11
3366 D12
3367 D12
3368 D13
3369 D13
3370 D13
3372 B13
3373 F1
3374 F2
3376 G2
3377 G1
3378 E13
3380 H2
3381 H2
3382 F4
3385 H4
3386 G6
3387 G6
3388 F8
3389 F9
3390 F10
3391 F10
3392 F11
3393 G10
3394 G11
3396 F2
3397 F2
3800 F3
3801 F3
3802 F3
3803 F4
3804 F4
3805 F4
4300 F7
6312 C2
6313 D2
6321 C4
6322 D4
6325 G12
6333 C5
6334 D5
6340 C7
6341 D7
6344 D8
6347 C8
6362 D10
6364 D11
6365 E12
6366 G10
6375 F1
6376 G1
6378 F14
7004 D8
7304 E1
7308-A D2
7308-B C2
7308-C D3
7308-D C3
7326 G13
7327 G14
7330-A D5
7330-B C5
7330-C D6
7330-D C6
7341 D8
7348 D8
7351 D10
7352 D9
7362 D11
7366-1 G5
7366-2 E14
7366-3 D12
7366-4 F13
7375 F1
7376 H1
7389 F9
7391 F11
7393 G11
9003 G4
9004 G5
9020 B14
F312 F9
F313 F7
F314 F7
F315 F7
F316 F7
F317 G7
F318 G7
F319 H7
F320 H7
F321 G7
F322 H7
F323 H7
F324 F7
F325 D13
F326 D2
F327 D4
F328 D5
F329 D7
F330 C1
F343 D7
F368 C3
F370 A15
F371 A15
F372 A15
F374 B15
F375 B15
F376 B15
F377 B15
F378 B15
F379 B15
F380 G13
F390 F10
I302 C2
I303 F1
I304 D1
I305 F1
I306 E1
I307 E1
I308 F2
I309 F2
I310 G1
I311 H2
I313 C1
I316 D3
I318 C8
I319 D8
I320 D10
I321 D11
I322 D4
I323 D12
I325 G12
I326 G13
I327 G13
I330 D4
I332 C6
I335 D6
I339 E11
I341 D7
I344 D8
I345 D7
I347 D8
I348 D8
I349 D9
I350 D9
I351 D9
I352 D9
I363 C11
I364 D11
I367 D11
I379 E14
I385 H4
I386 G5
I387 G5
I388 F3
I389 F9
I391 G10
I392 F11
I396 G11
I900 F6
I901 F6
I902 F6
I903 F6
I904 G6
I905 G6
I906 H6
I913 C11
I934 F6
I935 F11
I936 D14
I937 D14
I940 G10



1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
A B C D E F G H
A3 PROTECTION
A3
POK
VCC_GO
LATCH
DC_PROT
POR
5V(0V3)
5V1(4V2)
0V(0V)
+5V_STBY_SW
70-90V
VS PROTEC- TION
VA PROTEC- TION
VCC PROTEC- TION
12V PROTEC- TION
VA
VCC
+12V
2.5 Vref
LATCH
VCEGO
DCPROT
TO 1M03
B21
SSB
PH-B
1M03
VCC
STANDBY
+9V_STBY_SW
POWER_OK
KTY81
7308-B LM339D
7308-A LM339D
7308-D LM339D
7308-C LM339D
7330-B LM339D
7330-A LM339D
7330-D LM339D
7330-C LM339D
7304 TS2431
BC857BW 7341
7348 BC847BW
7352 BC847BW
7351 BC847BW
7362 BC847BW
7366-3 LM324D
7366-2 LM324D
7366-4 LM324D
7366-1 LM324D
BZX384-C3V3
P0102BL
BAT54 COL
BAS316
+9V_STBY
VSA CONTROL
7375 BC847BW
7376 BC847BW
VSK
S_GND
VAK
IAK
VRS
VRA
VCEGO
VSAGO
4300 RES
IAK BUFFER
TO CN7 PDP (DISPLAY)
20FMN-BMT-A-TFT
NC
STANDBY
BC857BW 7389
+12V_OVP
7391 BC847BW
7393 BC847BW
+8V6
+5V_STBY_SW
BZX384-C6V8
7326 BC847BW
7327 BC847BW
8V6 UNDER VOLTAGE PROTECTION
4V(0V1)
0V4(3V)
VSA_CONTROL
IAKS
VRA
VRS
PFCGO
VCEGO
VSAGO
SUPPLY_ON
A7
A2,A7
A2,A6
A2
3104 313 6017.3
E_14650_028.eps 180604

PSU (FHP 42”): Preconditioner


A5
PRECONDITIONER
A5
PRECONDITIONER
PRECONDITIONER CONTROL
100-230VAC2
100-230VAC1
6600
GBU8J
5600
BS42228-02
7610
STW26NM50
7608
BC369
7661
MC34063AD
DCOL
SWC
IS
SWE
TIMC
VCC
CIN_NEG
GND
IPK OSC
REFERENCE REGULATOR
7650
MC33368
VREF
RD
VFB
COMP
MULT
CS
ZC
AGND
LINE
NC1
NC2
FC
VCC
GATE
PGND
LEB
CONTROL
7601
BC847BW
7602
BC857BW
7641
BC817
7642
BCP56
7640
BSN20
7654
BC857BW
387V(0V)
400V_HOT
SW25V_HOT
41V (2V9)
15V(1V8)
BIAS
5V(0V)
5V (0V)
GROUND
COLD GROUND
MEASURED DC-VOLTAGES
NORMAL . .
STANDBY (. . .)
HOT GROUND
HOT BORDER
F996
F997
3999 1K
F998
F999
1
2
3
4
5
6
7
8
9
10
11
12
13
A
B
C
D
E
F
G
H
I

3104 313 6017.3

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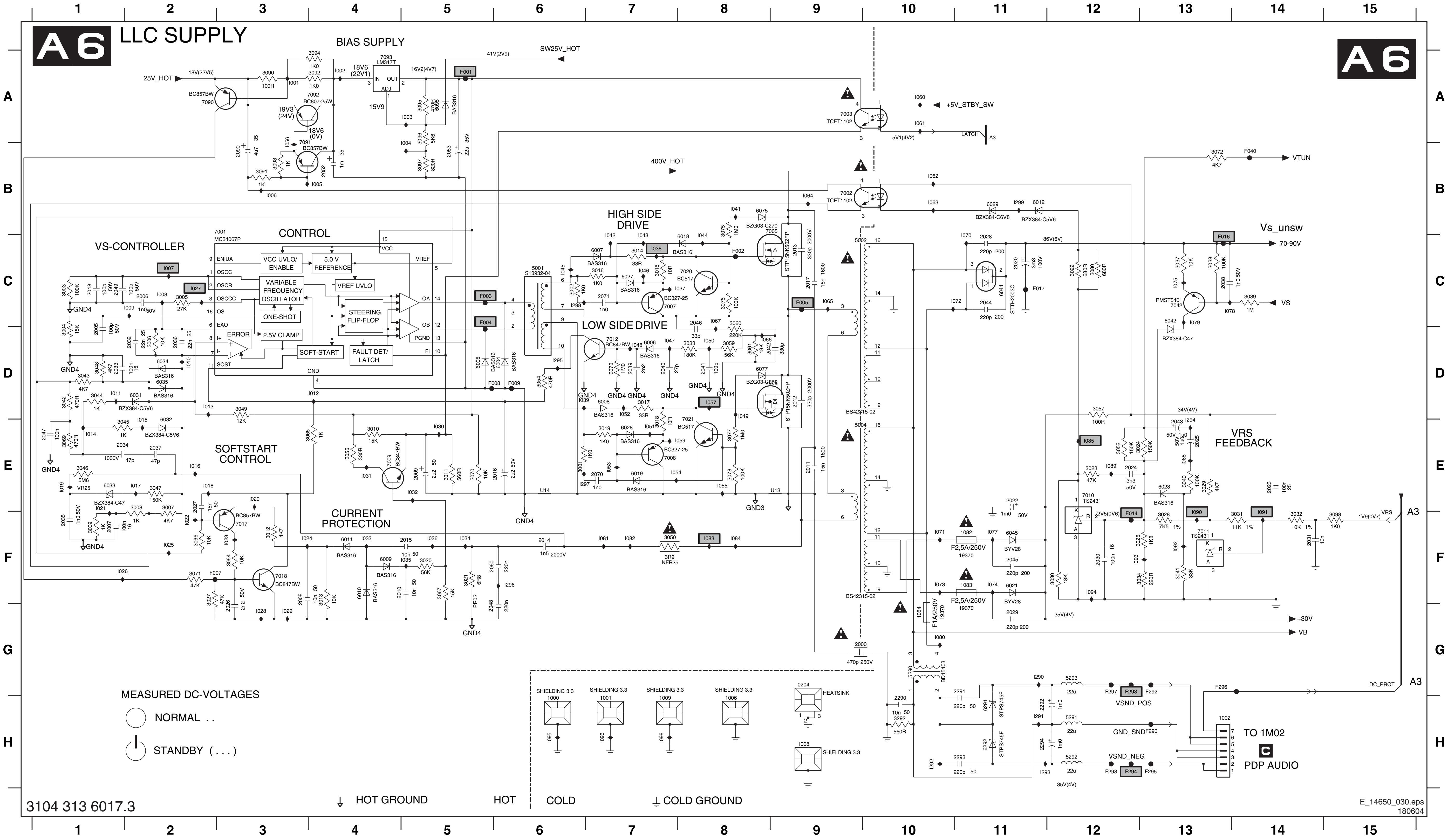
180604

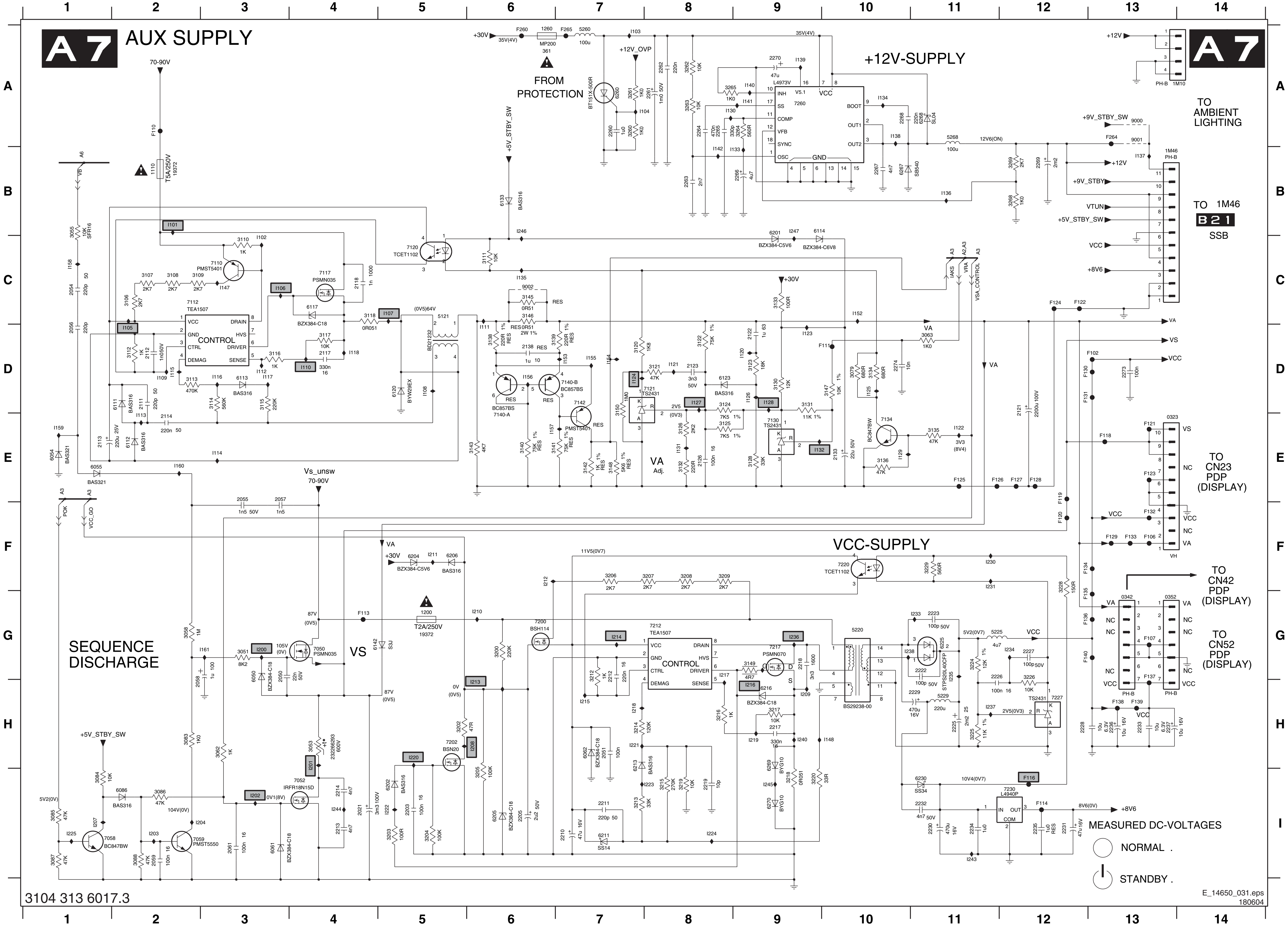
2600	B3
2601	B2
2602	C6
2603	C3
2604	C2
2605	C3
2608	H8
2610	B7
2611	B8
2612	B5
2613	C6
2614	C7
2616	C9
2617	C9
2640	H9
2642	H11
2651	H4
2653	H5
2654	H1
2655	H3
2656	H2
2660	E10
2661	F8
2662	F11
2663	E7
2664	F7
2665	H8
2666	H4
2670	I12
2671	H12
2672	H7
2673	G12
2674	G12
2675	G12
2676	G12
3601	D2
3602	D2
3603	E3
3604	E3
3605	F3
3606	C5
3607	F3
3608	C5
3609	E3
3610	C6
3611	C6
3612	H4
3613	G8
3614	C7
3615	C8
3616	G9
3617	G7
3618	G7
3619	F8
3620	C8
3621	C8
3622	C9
3623	G6
3639	H8
3640	H9
3641	H9
3642	G11
3643	G11
3651	H3
3652	G5
3654	H1
3655	H1
3659	G5
3660	F5
3661	G5
3662	E6
3663	E6
3664	H12
3665	F9
3666	H4
3667	H6
3668	F10
3669	I12
3671	H12
3673	F12
3675	E8
3676	F8
3677	F8
3678	F8
3679	G12
3680	G12
3681	G12
3682	H12
3683	G12
3684	G12
3685	H12
3999	A11
5600	A5
5601	B8
5612	B7
5660	E11
6600	B2
6601	F3
6602	G7
6605	A3
6606	A2
6608	B6
6609	C7
6611	B8
6640	G11
6641	H10
6642	H11
6643	H9
6651	H5
6652	H4
6653	H5
6654	H1
6660	F7
6661	E7
6663	E10
6665	E11
7601	G8
7602	G8
7608	C6
7610	C7
7640	H10
7641	G10
7642	G11
7650	G6
7654	H2
7661	D8
F600	B10
F601	B3
F602	E2
F604	D10
F605	D10
F606	I10
F608	D11
F609	F9
F610	G9
F996	A10
F997	A10
F998	A11
F999	A11
I602	D2
I603	B4
I604	B7
I605	B5
I606	C6
I607	C7
I608	B7
I609	C8
I610	E5
I611	E6
I612	E7
I613	E7
I614	B8
I615	H1
I616	G5
I617	G2
I618	H4
I619	H4
I620	H5
I621	G4
I622	G7
I623	G8
I624	H9
I625	G10
I626	H10
I627	F12
I628	G12
I629	H11
I630	C8
I631	E5
I632	E6
I633	H2
I634	B6
I635	C7
I636	H12
I637	F4
I638	E10
I639	E8
I640	E11
I641	E8
I642	E10
I643	G7
I644	G8
I645	G8
I646	G8
I647	F3
I648	H12
I649	G6

PSU (FHP 42”): LLC Supply

U13	E9
U14	E6
0204	G9
1000	H6
1001	H7
1002	H13
1006	H8
1008	H9
1009	H7
1082	F11
1083	F11
1084	G10
2000	G9
2005	D1
2006	C2
2007	F1
2008	F3
2009	E5
2010	F4
2011	E9
2012	D9
2013	C9
2014	F6
2015	F5
2016	E6
2017	C9
2018	C1
2020	C11
2022	E11
2023	E14
2024	E12
2025	E13
2026	G3
2027	E2
2028	C11
2029	G11
2030	F12
2031	F14
2032	D2
2033	D1
2034	E1
2035	F1
2036	D2
2037	E2
2038	C13
2039	D7
2040	D7
2041	D8
2042	D9
2043	E13
2044	C11
2045	F11
2046	C8
2047	E1
2048	G5
2049	C1
2052	B4
2053	B5
2060	F5
2070	E7
2071	C7
2090	B3
2290	H10
2291	G11
2292	H11
2293	H11
2294	H11
3001	E6
3002	C6
3003	C1
3004	D1
3005	C2
3006	D2
3007	E2
3008	E2
3009	F1
3010	E4
3011	E5
3012	F3
3013	F4
3014	C7
3015	C7
3016	C7
3017	D7
3018	E7
3019	E7
3020	F5
3021	F5
3022	C12
3023	E12
3024	E13
3025	F13
3027	F2
3028	F13
3029	E13
3030	F12
3031	F14
3032	F14
3033	D8
3034	F13
3037	C13
3038	C13
3039	C14
3040	E13
3041	F13
3042	D1
3043	D1
3044	D1
3045	E1
3046	E1
3047	E2
3048	D1
3049	D3
3050	F7
3052	E12
3054	D6
3056	E4
3057	D12
3059	D8
3060	C8
3061	D8
3064	F3
3065	E4
3066	F2
3067	F5
3069	E1
3070	E5
3071	F2
3072	B13
3073	D7
3075	B8
3076	C8
3077	E8
3078	E8
3080	C12
3090	A3
3091	B3
3092	A4
3093	B3
3094	A4
3095	A5
3096	A5
3097	B5
3098	F15
3292	H10
5001	C6
5002	C9
5004	E9
5290	G10
5291	H12
5292	H12
5293	G12
6004	D6
6005	D5
6006	D7
6007	C7
6008	D7
6009	F4
6010	F4
6011	F4
6012	B11
6018	C8
6019	E7
6021	F11
6023	E13
6027	C7
6028	E7
6029	B11
6031	D2
6032	E2
6033	E1
6034	D2
6035	D2
6042	C13
6044	C11
6045	F11
6075	B8
6077	D8
6095	A5
6291	H11
6292	H11
7001	B2
7002	B9
7003	A9
7005	B8
7006	D8
7007	C7
7008	E7
7009	E4
7010	E12
7011	F13
7012	D7
7017	F3
7018	F3
7020	C8
7021	E8
7042	C13
7090	A2
7091	B4
7092	A4
7093	A4
F001	A5
F002	C8
F003	C5
F004	C5
F005	C9
F007	F2
F008	D6
F009	D6
F014	F12
F016	C13
F017	C11
F040	B14
F290	H13
F292	G13
F293	G12
F294	H12
F295	H13
F296	G13
F297	G12
F298	H12
I001	A3
I002	A4
I003	A5
I004	B5
I005	B4
I006	B3
I007	C2
I008	C2
I009	C2
I010	D2
I011	D1
I012	D4
I013	D2
I014	E1
I015	E2
I016	E2
I017	E2
I018	E2
I019	E1
I020	E3
I021	E1
I022	F2
I023	F3
I024	F3
I025	F2
I026	F1
I027	C2
I028	G3
I029	G3
I030	E5
I031	E4
I032	E5
I033	F4
I034	F5
I035	F5
I036	F5
I037	C8
I038	C7
I039	D6
I041	B8
I042	C7
I043	C7
I044	C8
I045	C6
I046	C7
I047	D7
I048	D7
I049	D8
I050	D8
I051	E7
I052	D7
I053	E7
I054	E7
I055	E8
I056	A3
I057	D8
I059	E8
I060	A10
I061	A10
I062	B10
I063	B10
I064	B9
I065	C9
I066	D8
I067	C8
I070	C11
I071	F10
I072	C11
I073	F10
I074	F11
I075	C13
I077	F11
I078	C13
I079	C13
I080	G10
I081	F7
I082	F7
I083	F8
I084	F8
I085	E12
I088	E13
I089	E12
I090	F13
I091	F14
I092	F13
I093	F12
I094	F12
I095	H6
I096	H7
I098	H7
I290	G11
I291	H11
I292	H10
I293	H11
I294	E13
I295	D6
I296	F6
I297	E6
I298	C6
I299	B11


A6
LLC SUPPLY
BIAS SUPPLY
25V_HOT
18V(22V5)
SW25V_HOT
41V(2V9)
16V2(4V7)
18V6 (22V1)
LM317T
15V9
19V3 (24V)
18V6 (0V)
BC857BW
BC807-25W
400V_HOT
+5V_STBY_SW
LATCH
5V1(4V2)
TCET1102
VTUN
CONTROL
MC34067P
VCC UVLO/ ENABLE
5.0 V REFERENCE
VARIABLE FREQUENCY OSCILLATOR
VREF UVLO
STEERING FLIP-FLOP
ONE-SHOT
ERROR
2.5V CLAMP
SOFT-START
FAULT DET/ LATCH
VS-CONTROLLER
SOFTSTART CONTROL
CURRENT PROTECTION
HIGH SIDE DRIVE
LOW SIDE DRIVE
S13932-04
BS42315-02
STP18NK50ZFP
Vs_unsw
70-90V
86V(6V)
VS
VRS FEEDBACK
TS2431
34V(4V)
F2,5A/250V
F1A/250V
BYV28
+30V
VB
35V(4V)
1V9(0V7)
VRS
A3
DC_PROT
VSND_POS
GND_SND
VSND_NEG
TO 1M02
PDP AUDIO
SHIELDING 3.3
HEATSINK
GND4
GND3
MEASURED DC-VOLTAGES
NORMAL . .
STANDBY (. . .)
HOT GROUND
HOT
COLD
COLD GROUND
3104 313 6017.3
E_14650_030.eps
180604

PSU (FHP 42"): Aux Supply


A7
AUX SUPPLY
+12V-SUPPLY
FROM PROTECTION
TO AMBIENT LIGHTING
TO 1M46
B21
SSB
TO CN23 PDP (DISPLAY)
VCC-SUPPLY
TO CN42 PDP (DISPLAY)
TO CN52 PDP (DISPLAY)
SEQUENCE DISCHARGE
CONTROL
TEA1507
L4973V
L4940P
VS
VA
VCC
+30V
+12V
+8V6
+5V_STBY_SW
+9V_STBY_SW
Vs_unsw
70-90V
MEASURED DC-VOLTAGES
NORMAL .
STANDBY .
3104 313 6017.3
E_14650_031.eps
180604
1 2 3 4 5 6 7 8 9 10 11 12 13 14
A B C D E F G H I

0323 E13
0342 G13
0352 G13
1110 B2
1200 G5
1260 A6
1M10 A14
1M46 B13
2021 I4
2050 G3
2051 H7
2054 C1
2055 E3
2056 D1
2057 E3
2058 H2
2059 I2
2061 I3
2111 D2
2112 D2
2113 E1
2114 E2
2117 D4
2118 C4
2121 D12
2122 D9
2123 D8
2126 E8
2133 E10
2138 D6
2203 I5
2205 I6
2210 I7
2211 I7
2212 G7
2213 I4
2214 I4
2217 H9
2218 G9
2219 I8
2222 G11
2223 G11
2225 H11
2226 G11
2227 G12
2228 H12
2229 H11
2230 I11
2231 I12
2232 I11
2233 H13
2234 I11
2235 I12
2236 H13
2237 H13
2260 A7
2261 A8
2262 A8
2263 B8
2264 A8
2265 A8
2266 B9
2267 B10
2268 A10
2269 B12
2270 A9
2273 D13
2274 D10
3051 G3
3053 H4
3055 B1
3058 G2
3062 H3
3063 D11
3079 D10
3083 H2
3084 I1
3085 I1
3086 I2
3087 I1
3088 I2
3106 C2
3107 C2
3108 C2
3109 C2
3110 C3
3111 C6
3112 D2
3113 D2
3114 D3
3115 D3
3116 D3
3117 D4
3118 C4
3120 D7
3121 D8
3122 D8
3123 D9
3124 D8
3125 E8
3126 E8
3128 E9
3130 D9
3131 D9
3132 E8
3133 C9
3134 D10
3135 E11
3136 E10
3138 D6
3139 D6
3140 E6
3141 E6
3142 E7
3143 E6
3145 C6
3146 C6
3147 D10
3148 E7
3149 G9
3150 D7
3200 G6
3202 H5
3203 I5
3204 I5
3205 I6
3206 F7
3207 F8
3208 F8
3209 F8
3212 G7
3213 I7
3214 H7
3215 I8
3216 H8
3217 H9
3218 I9
3219 I8
3220 I9
3224 G11
3225 H11
3226 G12
3228 F12
3229 F11
3260 A7
3261 A7
3262 A8
3263 A8
3264 A9
3265 A8
3268 B12
3269 B12
5121 C5
5220 G10
5225 G11
5229 H11
5260 A7
5268 A11
6050 G3
6054 E1
6055 E1
6061 I3
6062 H7
6086 I2
6111 D2
6112 E2
6113 D3
6114 B9
6117 C4
6120 D5
6123 D8
6133 B6
6142 G4
6201 B9
6202 I5
6204 F5
6205 I6
6206 F5
6211 I7
6213 H7
6216 H9
6225 G11
6230 I11
6260 A7
6267 B10
6268 A11
6269 H9
6270 I9
7050 G4
7052 I4
7058 I1
7059 I2
7110 C3
7112 C2
7117 C4
7120 C5
7121 D8
7130 E9
7134 E10
7140-A D6
7140-B D7
7142 D7
7200 G6
7202 H5
7212 G8
7217 G9
7220 F10
7227 H12
7230 I12
7260 A9
9000 A13
9001 A13
9002 C6
F102 D13
F106 F13
F107 G13
F110 A2
F111 D10
F113 G4
F114 I12
F116 I12
F118 E13
F119 E12
F120 F12
F121 E13
F122 C12
F123 E13
F124 C12
F125 E11
F126 E11
F127 E12
F128 E12
F129 F13
F130 D12
F131 D12
F132 F13
F133 F13
F134 F12
F135 G12
F136 G12
F137 G13
F138 H13
F139 H13
F140 G12
F260 A6
F264 A13
F265 A7
I101 B2
I102 C3
I103 A7
I104 A8
I105 D2
I106 C3
I107 C5
I108 D5
I109 D2
I110 D4
I111 D6
I112 D3
I113 E2
I114 E3
I115 D2
I116 D3
I117 D3
I118 D4
I120 D9
I121 D8
I122 E11
I123 D9
I124 D7
I125 D10
I126 D9
I127 D8
I128 D9
I129 E10
I130 A8
I131 E8
I132 E9
I133 B9
I134 A10
I135 C6
I136 B11
I137 B13
I138 A10
I139 A9
I140 A9
I141 A9
I142 B8
I147 C3
I148 H10
I152 C10
I153 D7
I154 D7
I155 D7
I156 D6
I157 E6
I158 C1
I159 E1
I160 E2
I161 G3
I200 G3
I201 H4
I202 I3
I203 I2
I204 I3
I207 I1
I208 H6
I209 H9
I210 G6
I211 F5
I212 F6
I213 H6
I214 G7
I215 H7
I216 H9
I217 G8
I218 H7
I219 H9
I220 H5
I221 H7
I222 I5
I223 I8
I224 I8
I225 I1
I230 F11
I231 F11
I233 G11
I234 G12
I235 G11
I236 G9
I237 H11
I238 G10
I240 H9
I243 I11
I244 I4
I245 I9
I246 B6
I247 B9

Layout PSU (FHP 42”) (Overview Top Side)

0201	B4
0203	D3
0204	D7
0306	G3
0307	G2
0308	G1
0309	G1
0311	G3
0323	F8
0342	F8
0352	E8
1002	A8
1004	F8
1082	C8
1083	B8
1084	A8
1110	D7
1200	E6
1260	F8
1400	F1
1402	F1
1450	F4
1460	E4
1M03	G5
1M05	G3
1M10	A8
1M46	G8
2000	A5
2001	E2
2002	F1
2003	E2
2004	E2
2005	A4
2006	A4
2007	A5
2008	A4
2009	A4
2010	A3
2011	B5
2012	A5
2013	C5
2014	B5
2015	A4
2016	A4
2017	C5
2018	A4
2019	E1
2020	B8
2021	D8
2022	B8
2023	E5
2024	E5
2025	E8
2026	A4
2027	A4
2028	C8
2029	C8
2030	E5
2031	E5
2032	A4
2033	A4
2034	B5
2035	A5
2036	A4
2037	B5
2038	D8
2039	B3
2040	B3
2041	B3
2042	B4
2043	E8
2044	C8
2045	C8
2046	B3
2047	A4
2048	A5
2049	A4
2050	E8
2051	F6
2052	A4
2053	A4
2054	D8
2055	D8
2056	D8
2057	D8
2058	D8
2059	D8
2060	A5
2061	D8
2070	B4
2071	B4
2090	B3
2111	D5
2112	D5
2113	D5
2114	D5
2117	D6
2118	C6
2121	C8
2122	E6
2123	D5
2126	D6
2133	E5
2138	E6
2203	F5
2205	F5
2210	F6
2211	F6
2212	F6
2213	D8
2214	D8
2217	F6
2218	E6
2219	F5
2222	F8
2223	F8
2225	F8
2226	E8
2227	E8
2228	E8
2229	E6
2230	E6
2231	E7
2232	E6
2233	E8
2234	E8
2235	E8
2236	E8
2237	E8
2260	F8
2261	G8
2262	G8
2263	G8
2264	G8
2265	G8
2266	G8
2267	G8
2268	G8
2269	F8
2270	G8
2273	G8
2274	D6
2290	B8
2291	B8
2292	A8
2293	C8
2294	A8
2303	G7
2304	G7
2305	G7
2306	G7
2316	G7
2322	G7
2324	G7
2343	G6
2350	G7
2352	G6
2364	G5
2366	G6
2376	G6
2380	G7
2381	G6
2385	G6
2393	G6
2396	G8
2400	F1
2401	E1
2402	F1
2403	E1
2404	F2
2405	E1
2406	E2
2407	D1
2408	E2
2465	E5
2502	F5
2503	F4
2504	G4
2505	B3
2507	F5
2508	F5
2509	F5
2510	F5
2511	G4
2512	G4
2513	G3
2530	G4
2531	G4
2532	G3
2533	G4
2540	G5
2541	G5
2600	E2
2601	D2
2602	B2
2603	B1
2604	C1
2605	C1
2608	A2
2610	C2
2611	C2
2612	B2
2613	B2
2614	B2
2616	D4
2617	C4
2640	A2
2642	A2
2651	A3
2653	A3
2654	B2
2655	A3
2656	B3
2660	A2
2661	A1
2662	A2
2663	A2
2664	A2
2665	B3
2666	A2
2670	A3
2671	A3
2672	A2
2673	B2
2674	B2
2675	B2
2676	B2
3001	B4
3002	B4
3003	A4
3004	A4
3005	A4
3006	A4
3007	A4
3008	A5
3009	A5
3010	A3
3011	A4
3012	A4
3013	A4
3014	B4
3015	C4
3016	C4
3017	B3
3018	B4
3019	B4
3020	A3
3021	B5
3022	E5
3023	E5
3024	D8
3025	E5
3026	G4
3027	A4
3028	E5
3029	E5
3030	E5
3031	E5
3032	E5
3033	B3
3034	E5
3035	F4
3036	D1
3037	D8
3038	D8
3039	D8
3040	E5
3041	E5
3042	A4
3043	A4
3044	A4
3045	A4
3046	A5
3047	A4
3048	A4
3049	A3
3050	B5
3051	D8
3052	D8
3053	D8
3054	B3
3055	C8
3056	A3
3057	E5
3058	D8
3059	B4
3060	B3
3061	B4
3062	D8
3063	D6
3064	A4
3065	A4
3066	A4
3067	A4
3069	A4
3070	A4
3071	A4
3072	D8
3073	B3
3075	C4
3076	C4
3077	A5
3078	B4
3079	D5
3080	E5
3083	D8
3084	D8
3085	D8
3086	D8
3087	D8
3088	D8
3090	A3
3091	B3
3092	A3
3093	B3
3094	A3
3095	B4
3096	B4
3097	B4
3098	E5
3106	D6
3107	D6
3108	D6
3109	D6
3110	D6
3111	E5
3112	D5
3113	D5
3114	D5
3115	D5
3116	D6
3117	D6
3118	D7
3120	D5
3121	D5
3122	E6
3123	E6
3124	D6
3125	D6
3126	E6
3128	E6
3130	D5
3131	D6
3132	E5
3133	E5
3134	D5
3135	D5
3136	D5
3138	E6
3139	E6
3140	E6
3141	E6
3142	E6
3143	E6
3145	E6
3146	E6
3147	D6
3148	E6
3149	F6
3150	D5
3200	F5
3202	F6
3203	G6
3204	F5
3205	F6
3206	F5
3207	F5
3208	F5
3209	F5
3212	F6
3213	F6
3214	F6
3215	F6
3216	F6
3217	F6
3218	F6
3219	F5
3220	G6
3224	E8
3225	E8
3226	E8
3228	E8
3229	E8
3260	F8
3261	F8
3262	G8
3263	G8
3264	G8
3265	G8
3268	G8
3269	G8
3292	B8
3300	E6
3301	E6
3302	F8
3303	G7
3304	G7
3305	G7
3306	G7
3307	G7
3308	G6
3311	F8
3312	G7
3313	G7
3316	G7
3317	G7
3320	G7
3321	G7
3322	G7
3323	G7
3324	G7
3325	G7
3326	F7
3327	G7
3328	G8
3332	G7
3333	G7
3334	G7
3335	G7
3340	G7
3341	G6
3342	G6
3343	G6
3344	G6
3345	G6
3347	G6
3348	G6
3349	G7
3350	G7
3351	G7
3352	G6
3353	G6
3354	G6
3355	G5
3356	G4
3357	G5
3358	G6
3359	G6
3360	G5
3361	G5
3362	G4
3363	G5
3364	G5
3366	G7
3367	G6
3368	F7
3369	G6
3370	F7
3372	G4
3373	G6
3374	G6
3376	G6
3377	G6
3378	G5
3380	G6
3381	G6
3382	G7
3385	G6
3386	G6
3387	G6
3388	G7
3389	G7
3390	G5
3391	G5
3392	G5
3393	G6
3394	G6
3396	F8
3397	G8
3400	F2
3401	G1
3404	F1
3450	E4
3451	E3
3452	C1
3460	E5
3461	E5
3463	F5
3465	E5
3467	E5
3469	E5
3470	E5
3501	G4
3502	F4
3503	F4
3504	G4
3505	F5
3506	E4
3507	F4
3508	D4
3520	G3
3530	G3
3601	A5
3602	A5
3603	A2
3604	A2
3605	A2
3606	B2
3607	A2
3608	B2
3609	A2
3610	B2
3611	B2
3612	A2
3613	B2
3614	C2
3615	C2
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3621	C2
3622	C2
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3640	A2
3641	A2
3642	A2
3643	A2
3651	A3
3652	B3
3654	B3
3655	A3
3659	A3
3660	A2
3661	A3
3662	A2
3663	A2
3664	A3
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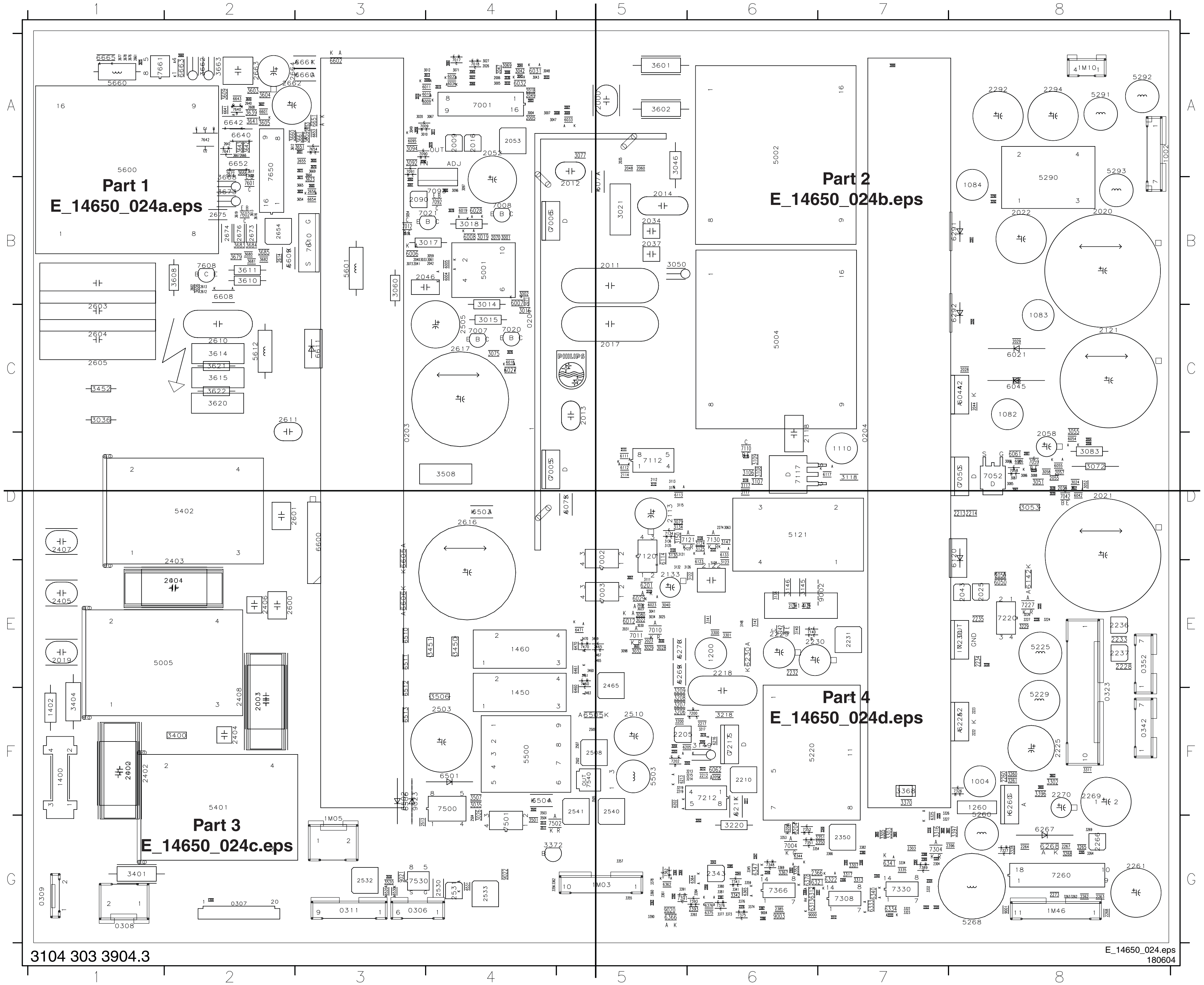
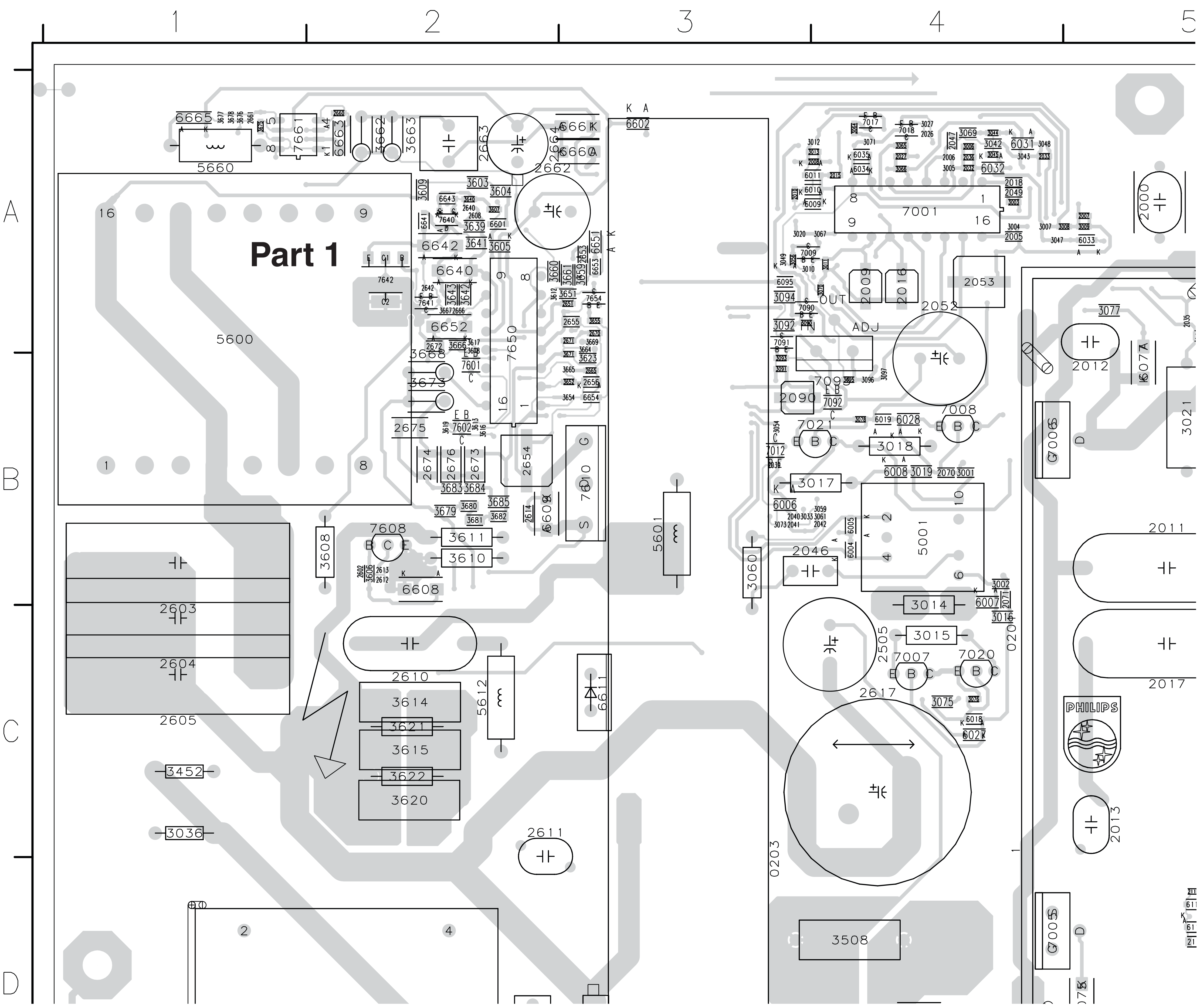
3667	A2
3668	B2
3669	A3
3671	B3
3673	B2
3675	A1
3676	A1
3677	A1
3678	A1
3679	B2
3680	B2
3681	B2
3682	B2
3683	B2
3684	B2
3685	B2
3800	F8
3801	G7
3802	G7
3803	F8
3804	G7
3805	G7
3999	A7
4300	G2
5001	B4
5002	A7
5004	C7
5005	E1
5121	D6
5220	E6
5225	E8
5229	E8
5260	G8
5268	G8
5290	A8
5291	A8
5292	A8
5293	B8
5401	F3
5402	D2
5500	F4
5503	F5
5600	A1
5601	B3
5612	C2
5660	A1
6004	B4
6005	B4
6006	B3
6007	C4
6008	B4
6009	A4
6010	A4
6011	A3
6012	E5
6018	C4
6019	B4
6021	C8
6023	E5
6027	C4
6028	B4
6029	E5
6031	A4
6032	A4
6033	A5
6034	A4
6035	A4
6042	D8
6044	C8
6045	C8
6050	E8
6054	D8
6055	D8
6061	D8
6062	F6
6075	D5
6077	B5
6086	D8
6095	A3
6111	D5
6112	D5
6113	D5
6114	D5
6117	D7
6120	D8
6123	D6
6133	D6
6142	E8
6201	E5
6202	F5
6204	G6
6205	F5
6206	G6
6211	F6
6213	F5
6216	F6
6225	F8
6230	E6
6260	F8
6267	G8
6268	G8
6269	E5
6270	E5
6291	B8
6292	C8
6312	G6
6313	G7
6321	G6
6322	G7
6325	G7
6333	G7
6334	G7
6340	G7
6341	G7
6344	G6
6347	G6
6362	G5
6364	G6
6365	G6
6366	G5
6375	G6
6376	G6
6378	G6
6460	F5
6461	E5
6470	E5
6471	E5
6501	F4
6502	G3
6503	D4
6504	F4
6505	F5
6506	G3
6510	E3
6511	E3
6512	F3
6513	F3
6520	G3
6530	G3
6531	G4
6600	E3
6601	A2
6602	A3
6605	D3
6606	E3
6608	B2
6609	B2
6611	C3
6640	A2
6641	A2
6642	A2
6643	A2
6651	A3
6652	A2
6653	A2
6654	B3
6660	A3
6661	A3
6663	A2
6665	A1
7001	A4
7002	D5
7003	E5
7004	G6
7005	D5
7006	B5
7007	C4
7008	B4
7009	A4
7010	E5
7011	E5
7012	B3
7017	A4
7018	A4
7020	C4
7021	B4
7042	D8
7050	D8
7052	D8
7058	D8
7059	D8
7090	A4
7091	A3
7092	B4
7093	A4
7110	D6
7112	D5
7117	D6
7120	E5
7121	D6
7130	D6
7134	D5
7140	E7
7142	E6
7200	F6
7202	F5
7212	G5
7217	F6
7220	E8
7227	E8
7230	E8
7260	G8
7304	G7
7308	G7
7326	F8
7327	G8
7330	G7
7341	G6
7348	G6
7351	G6
7352	G6
7362	G5
7366	G6
7375	G6
7376	G6
7389	G7
7391	G5
7393	G6
7460	E5
7465	E5
7470	E5
7500	G4
7501	G4
7502	G4
7530	G3
7540	F5
7601	B2
7602	B2
7608	B2
7610	B2
7640	A2
7641	A2
7642	A2
7650	A2
7654	A3
7661	A1
9000	G6
9001	G8
9002	E7
9003	G6
9004	G6
9020	G5
9021	G3
9022	G4
9023	F3

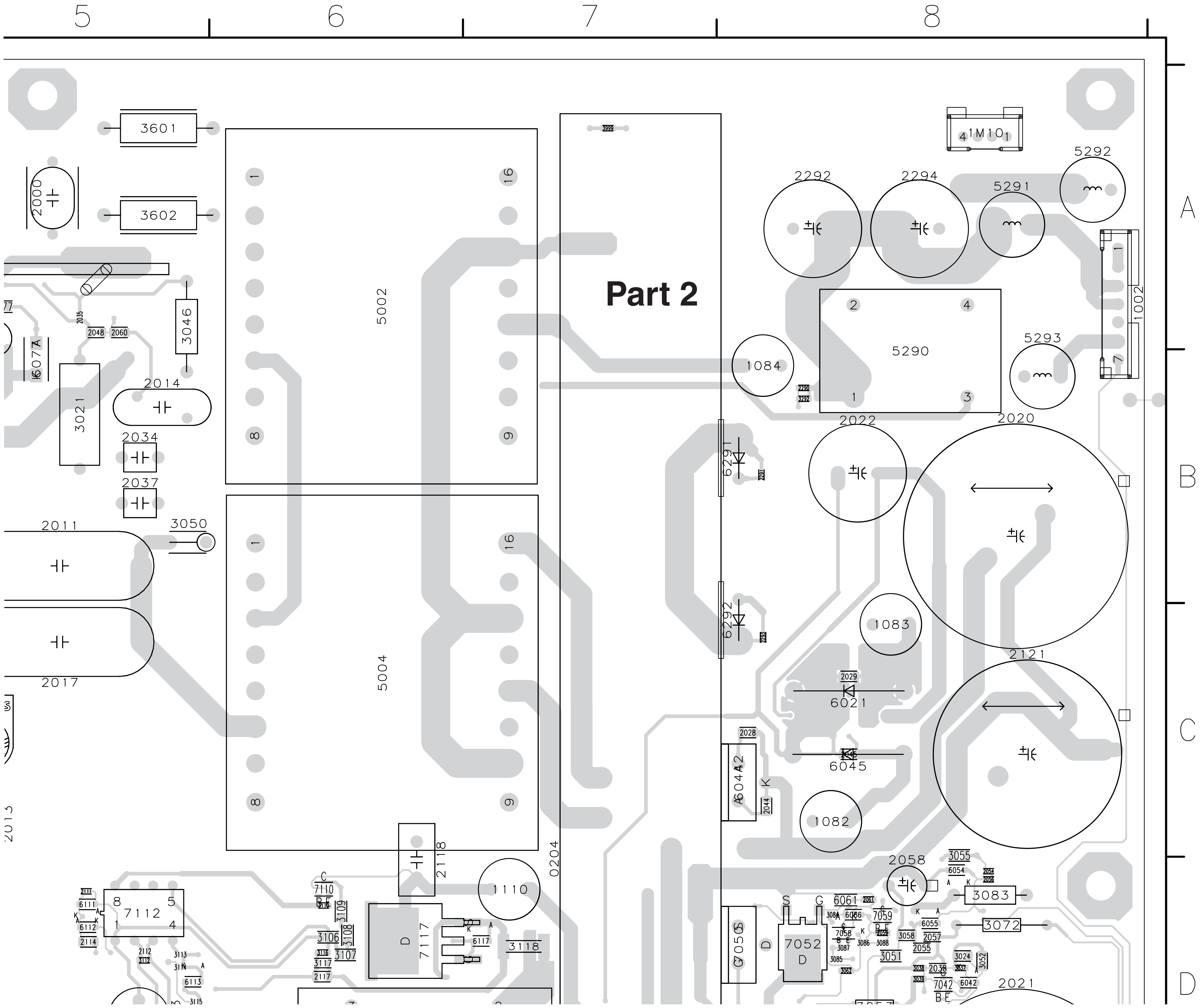


Layout PSU (FHP 42”) (Part 1 Top Side)


1
2
3
4
5
A
B
C
D
Part 1
5600
5660
6665
7661
6663
3662
3663
2663
2664
6661
6660
2662
6602
3609
3603
3604
6643
7640
3639
6601
6642
3641
3605
6640
7642
7641
6652
3668
3673
7601
7650
3660
3661
3651
7654
2675
7602
2674
2676
2673
2654
3683
3684
3685
3682
3679
3680
3681
6609
7610
7608
3611
3610
3608
6608
2603
2604
2605
2610
3614
3621
3615
3622
3620
5612
6611
2611
3452
3036
5601
3060
7001
6031
6032
3042
3069
7017
7018
6035
6034
6011
6010
6009
2018
2049
2005
2000
6033
3077
2012
6077
3021
G006
2053
2009
2016
2052
7009
7090
3094
6095
3092
7091
2090
7092
OUT
ADJ
7008
7021
6028
6019
3018
7012
6008
3019
2070
3001
3017
6006
5001
2046
3014
6007
3002
3016
3015
2505
7007
7020
2617
3075
6027
PHILIPS
2011
2017
2013
0203
3508
G005

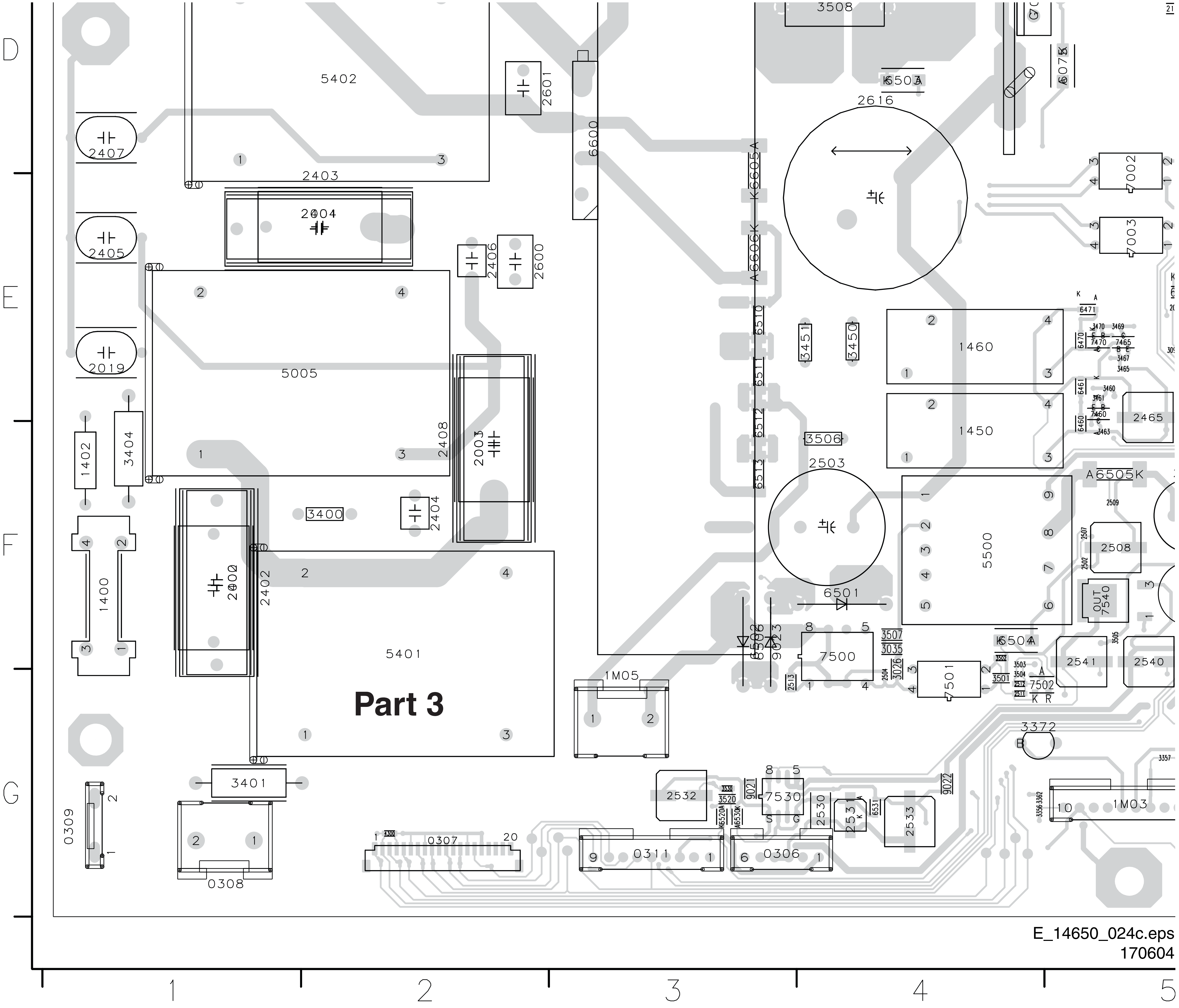
E_14650_024a.eps
170604

Layout PSU (FHP 42") (Part 2 Top Side)


5
6
7
8
A
B
C
D
Part 2
3601
3602
2000
3046
2048
2060
2035
6077
3021
2014
2034
2037
2011
2017
3050
5002
5004
1
16
8
9
1M10
5292
2292
2294
5291
1002
5290
1084
5293
2022
2020
6291
6292
1083
2121
2029
6021
6045
2028
6042
2044
1082
2058
3055
6054
3083
3072
6061
7059
7058
7052
7050
3051
3058
2057
2055
6055
3024
3052
2038
7042
6042
2021
2118
0204
1110
7110
3109
3108
3106
3107
3117
2117
7117
6117
3118
7112
6111
6112
2114
2112
3113
3114
6113
3115

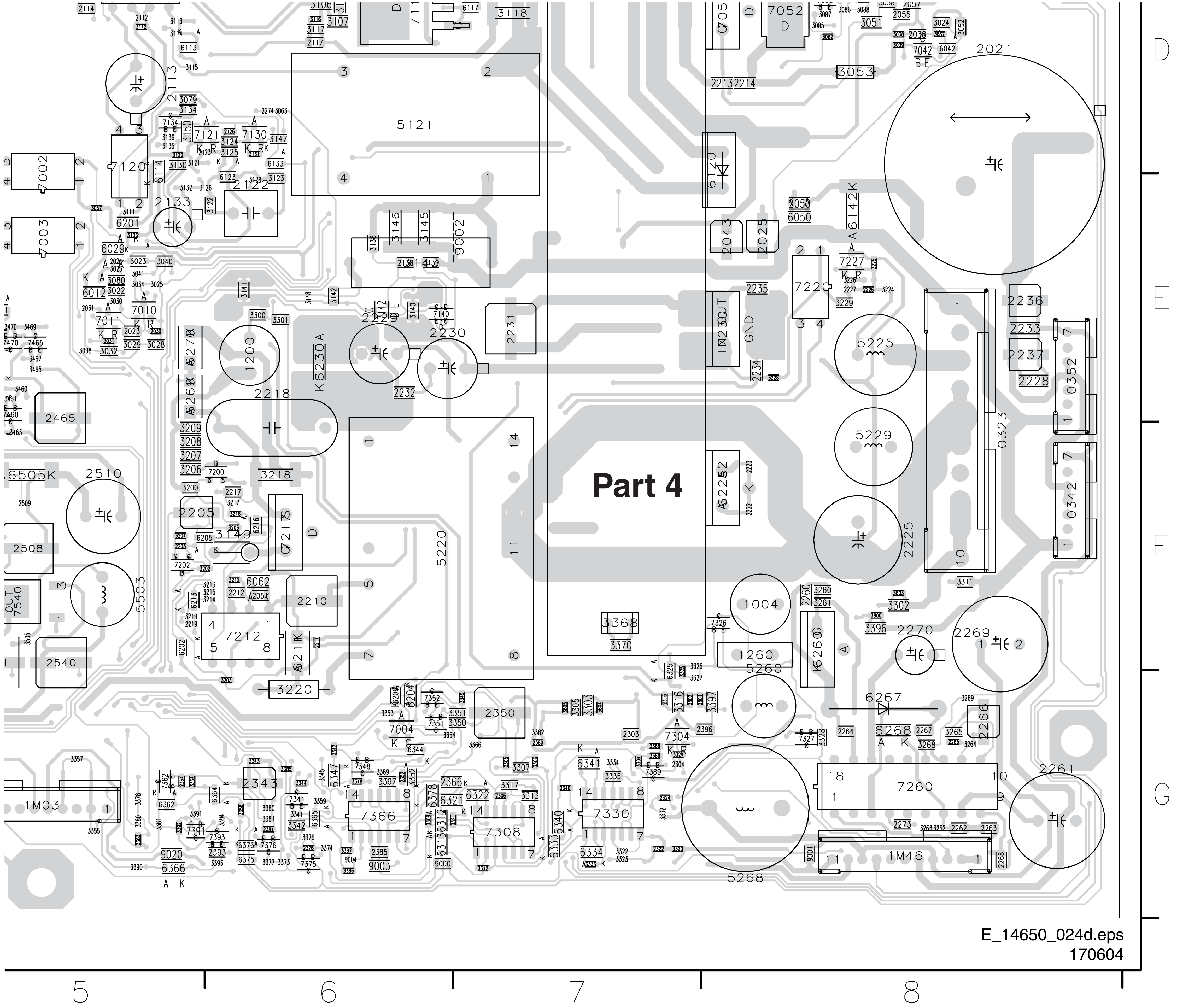
E_14650_024b.eps
170604

Layout PSU (FHP 42”) (Part 3 Top Side)


D
E
F
G
1
2
3
4
5
Part 3
5402
2601
6600
3508
2616
6503
6507
2407
2403
2004
2405
2406
2600
5005
2019
2408
2003
1402
3404
3400
2404
1400
2002
2402
5401
3401
0309
0308
0307
1M05
0311
0306
2532
7530
2530
2531
2533
1M03
3372
6605
6606
6510
6511
6512
6513
3451
3450
3506
2503
1460
1450
2465
6505
5500
2508
7540
6501
6502
9023
7500
3507
3035
3026
6504
7501
7502
2541
2540
7002
7003
9021
9022
6531
3505
3357
6471
6470
6461
6460
3470
3469
7470
7465
3467
3465
3460
3461
7460
3463
2509
2507
2502
2513
2504
3502
3503
3504
3501
2512
2511
3538
3520
6520
6530
3356
3362

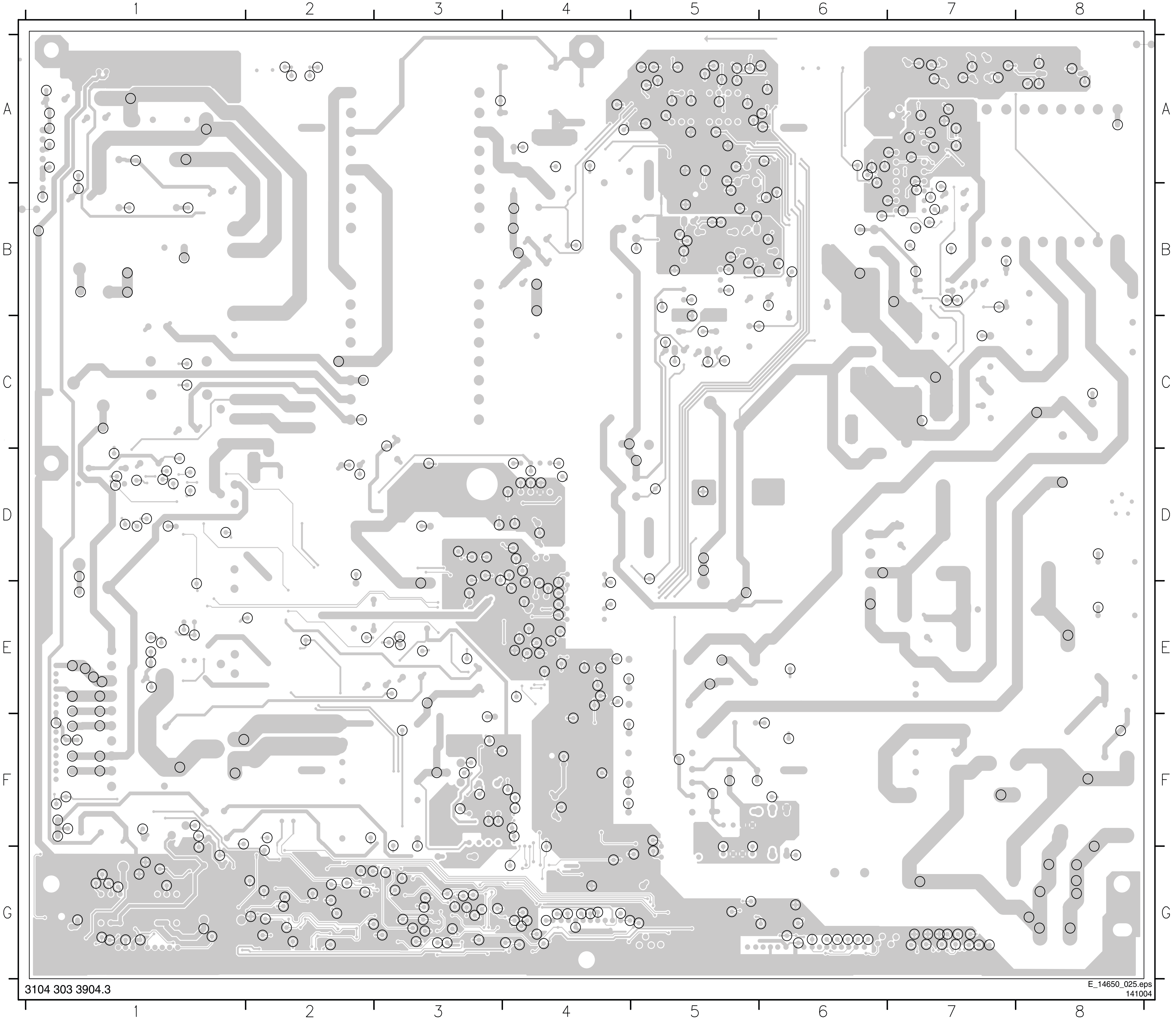
E_14650_024c.eps
170604

Layout PSU (FHP 42”) (Part 4 Top Side)


Part 4
5121
5220
2021
0323
0352
0342
5225
5229
2225
1004
1260
5260
5268
7260
1M46
1M03
2261
2269
2270
6267
7212
2218
1200
2229
2230
2231
2210
2205
2465
2508
2510
2540
5503
7540
7002
7003
7120
7121
7130
2133
2122
9002
6120
7220
7227
2043
2025
3053
7052
2236
2233
2237
2228
6225
3368
3370
3220
2350
7366
7308
7330
7304
7004
2343
9003
9020
D
E
F
G
5
6
7
8

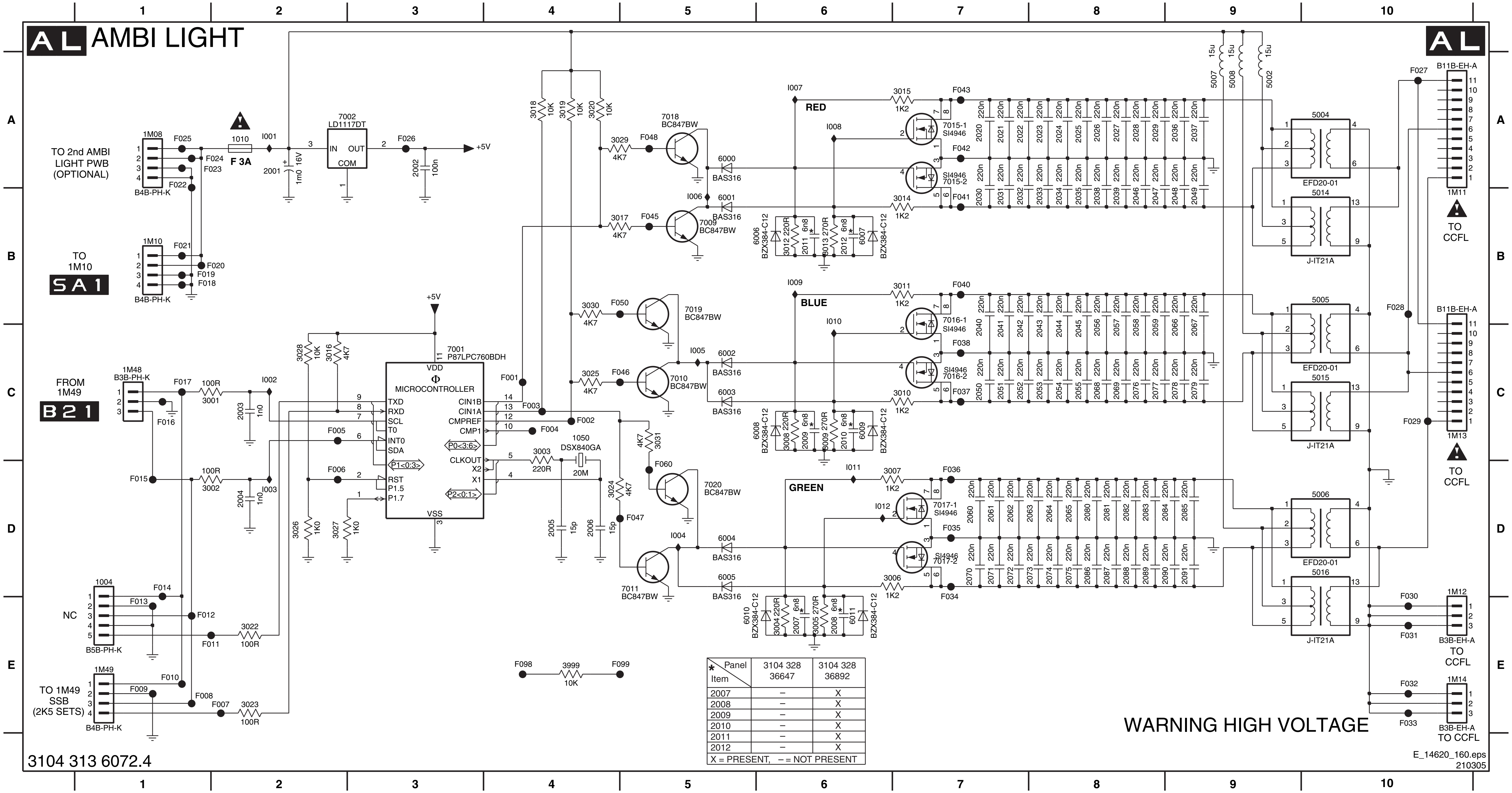
E_14650_024d.eps
170604

Layout PSU (FHP 42") (Bottom Side)


1
2
3
4
5
6
7
8
A
B
C
D
E
F
G
3104 303 3904.3
E_14650_025.eps
141004

Ambi Light

1004 D1
1010 A2
1050 C4
1M08 A1
1M10 B1
1M11 B10
1M12 D10
1M13 C10
1M14 E10
1M48 C1
1M49 E1
2001 A2
2002 A3
2003 C2
2004 D2
2005 D4
2006 D4
2007 E6
2008 E6
2009 C6
2010 C6
2011 B6
2012 B6
2020 A7
2021 A7
2022 A7
2023 A8
2024 A8
2025 A8
2026 A8
2027 A8
2028 A8
2029 A8
2030 B7
2031 B7
2032 B7
2033 B8
2034 B8
2035 B8
2036 A9
2037 A9
2038 B8
2039 B8
2040 C7
2041 C7
2042 C7
2043 C8
2044 C8
2045 C8
2046 B8
2047 B8
2048 B9
2049 B9
2050 C7
2051 C7
2052 C7
2053 C8
2054 C8
2055 C8
2056 C8
2057 C8
2058 C8
2059 C8
2060 D7
2061 D7
2062 D7
2063 D8
2064 D8
2065 D8
2066 C9
2067 C9
2068 C8
2069 C8
2070 D7
2071 D7
2072 D7
2073 D8
2074 D8
2075 D8
2076 C8
2077 C8
2078 C9
2079 C9
2080 D8
2081 D8
2082 D8
2083 D8
2084 D9
2085 D9
2086 D8
2087 D8
2088 D8
2089 D8
2090 D9
2091 D9
3001 C1
3002 D1
3003 C4
3004 E6
3005 E6
3006 D6
3007 D6
3008 C6
3009 C6
3010 C7
3011 B7
3012 B6
3013 B6
3014 B7
3015 A7
3016 C2
3017 B4
3018 A4
3019 A4
3020 A4
3022 E2
3023 E2
3024 D4
3025 C4
3026 D2
3027 D2
3028 C2
3029 A4
3030 B4
3031 C5
3999 E4
5002 A9
5004 A10
5005 B10
5006 D10
5007 A9
5008 A9
5014 B10
5015 C10
5016 D10
6000 A5
6001 B5
6002 C5
6003 C5
6004 D5
6005 D5
6006 B6
6007 B6
6008 C6
6009 C6
6010 E5
6011 E6
7001 C3
7002 A2
7009 B5
7010 C5
7011 D5
7015-1 A7
7015-2 A7
7016-1 B7
7016-2 C7
7017-1 D7
7017-2 D7
7018 A5
7019 B5
7020 D5
F001 C4
F002 C4
F003 C4
F004 C4
F005 C2
F006 D2
F007 E2
F008 E1
F009 E1
F010 E1
F011 E1
F012 E1
F013 E1
F014 D1
F015 D1
F016 C1
F017 C1
F018 B1
F019 B1
F020 B2
F021 B1
F022 A1
F023 A2
F024 A2
F025 A1
F026 A3
F027 A10
F028 B10
F029 C10
F030 E10
F031 E10
F032 E10
F033 E10
F034 E7
F035 D7
F036 D7
F037 C7
F038 C7
F040 B7
F041 B7
F042 A7
F043 A7
F045 B5
F046 C5
F047 D5
F048 A5
F050 B4
F060 D5
F098 E4
F099 E5
I001 A2
I002 C2
I003 D2
I004 D5
I005 C5
I006 B5
I007 A6
I008 A6
I009 B6
I010 B6
I011 D6
I012 D6

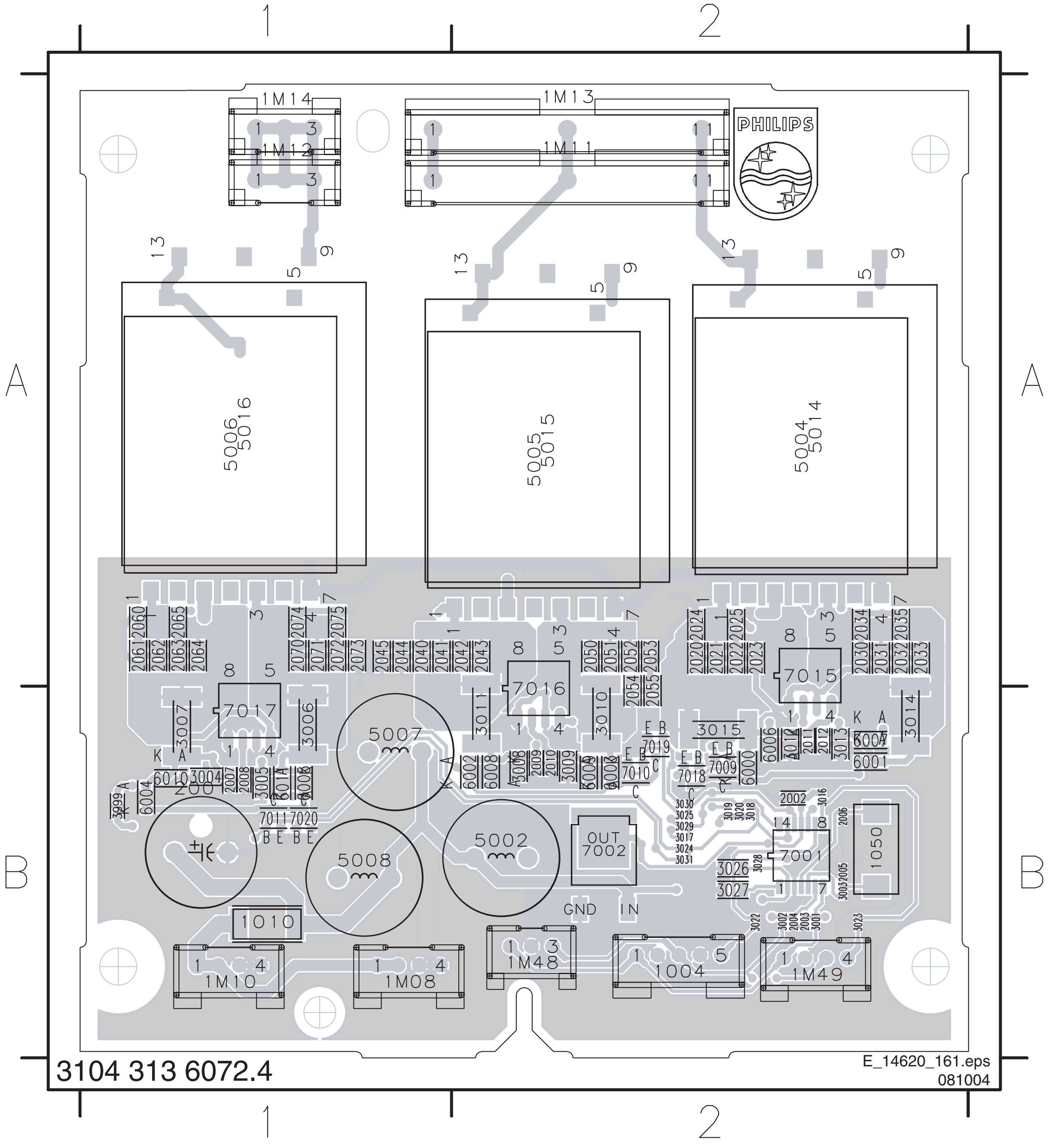

AL AMBI LIGHT
AL
1 2 3 4 5 6 7 8 9 10
A B C D E
TO 2nd AMBI LIGHT PWB (OPTIONAL)
1M08
B4B-PH-K
TO 1M10
SA1
1M10
FROM 1M49
B21
1M48
B3B-PH-K
NC
1004
B5B-PH-K
TO 1M49 SSB (2K5 SETS)
1M49
1010
F 3A
2001 1m0 16V
7002 LD1117DT
IN OUT COM
2002 100n
+5V
7001 P87LPC760BDH
VDD
MICROCONTROLLER
TXD RXD SCL T0 INT0 SDA
RST P1.5 P1.7
CIN1B CIN1A CMPREF CMP1
P0<3:6> P1<0:3> P2<0:1>
CLKOUT X2 X1
VSS
1050 DSX840GA 20M
3003 220R
2005 15p
2006 15p
3001 100R
3002 100R
3022 100R
3023 100R
3018 10K 3019 10K 3020 10K
3028 10K 3016 4K7
3026 1K0 3027 1K0
3029 4K7 3017 4K7 3030 4K7 3025 4K7 3031 4K7 3024 4K7
7018 BC847BW
7009 BC847BW
7019 BC847BW
7010 BC847BW
7020 BC847BW
7011 BC847BW
6000 BAS316 6001 BAS316 6002 BAS316 6003 BAS316 6004 BAS316 6005 BAS316
RED
BLUE
GREEN
3015 1K2 3014 1K2 3011 1K2 3010 1K2 3007 1K2 3006 1K2
7015-1 SI4946 7015-2 SI4946
7016-1 SI4946 7016-2 SI4946
7017-1 SI4946 7017-2 SI4946
BZX384-C12
3012 220R 3013 270R 3008 220R 3009 270R 3004 220R 3005 270R
6n8
220n
5007 15u 5008 15u 5002 15u
5004 EFD20-01
5014 J-IT21A
5005 EFD20-01
5015 J-IT21A
5006 EFD20-01
5016 J-IT21A
1M11 B11B-EH-A
1M13 B11B-EH-A
1M12 B3B-EH-A
1M14 B3B-EH-A
TO CCFL
F098 3999 10K F099
WARNING HIGH VOLTAGE
3104 313 6072.4
E_14620_160.eps
210305

★ Panel / Item	3104 328 36647	3104 328 36892
2007	–	X
2008	–	X
2009	–	X
2010	–	X
2011	–	X
2012	–	X

X = PRESENT, – = NOT PRESENT

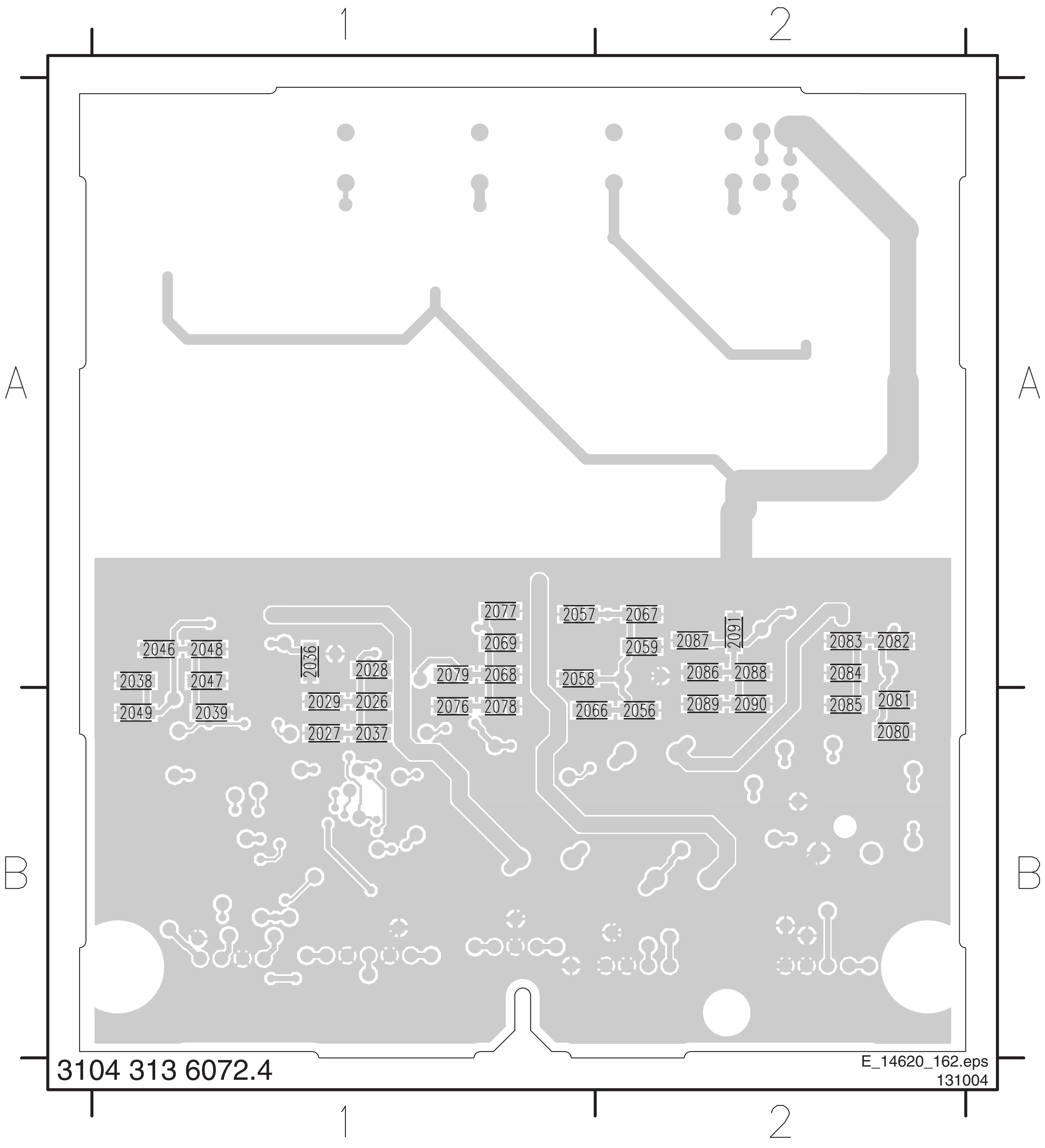
Layout Ambi Light (Top Side)

1004	B2	2011	B2	2051	A2	3005	B1	3027	B2	6006	B2
1010	B1	2012	B2	2052	A2	3006	B1	3028	B2	6007	B2
1050	B2	2020	A2	2053	A2	3007	B1	3029	B2	6008	B2
1M08	B1	2021	A2	2054	B2	3008	B2	3030	B2	6009	B2
1M10	B1	2022	A2	2055	B2	3009	B2	3031	B2	6010	B1
1M11	A2	2023	A2	2060	A1	3010	B2	3999	B1	6011	B1
1M12	A1	2024	A2	2061	A1	3011	B2	5002	B2	7001	B2
1M13	A2	2025	A2	2062	A1	3012	B2	5004	A2	7002	B2
1M14	A1	2030	A2	2063	A1	3013	B2	5005	A1	7009	B2
1M48	B2	2031	A2	2064	A1	3014	B2	5006	A1	7010	B2
1M49	B2	2032	A2	2065	A1	3015	B2	5007	B1	7011	B1
2001	B1	2033	A2	2070	A1	3016	B2	5008	B1	7015	B2
2002	B2	2034	A2	2071	A1	3017	B2	5014	A2	7016	B2
2003	B2	2035	A2	2072	A1	3018	B2	5015	A1	7017	B1
2004	B2	2040	A1	2073	A1	3019	B2	5016	A1	7018	B2
2005	B2	2041	A1	2074	A1	3020	B2	6000	B2	7019	B2
2006	B2	2042	A2	2075	A1	3022	B2	6001	B2	7020	B1
2007	B1	2043	A2	3001	B2	3023	B2	6002	B2		
2008	B1	2044	A1	3002	B2	3024	B2	6003	B2		
2009	B2	2045	A1	3003	B2	3025	B2	6004	B1		
2010	B2	2050	A2	3004	B1	3026	B2	6005	B1		


1
2
A
B
1M14
1M12
1M13
1M11
PHILIPS
5006
5016
5005
5015
5004
5014
7017
7016
7015
5007
5008
5002
OUT
7002
7001
1050
1010
1M10
1M08
1M48
1004
1M49
GND
IN
3104 313 6072.4
E_14620_161.eps
081004

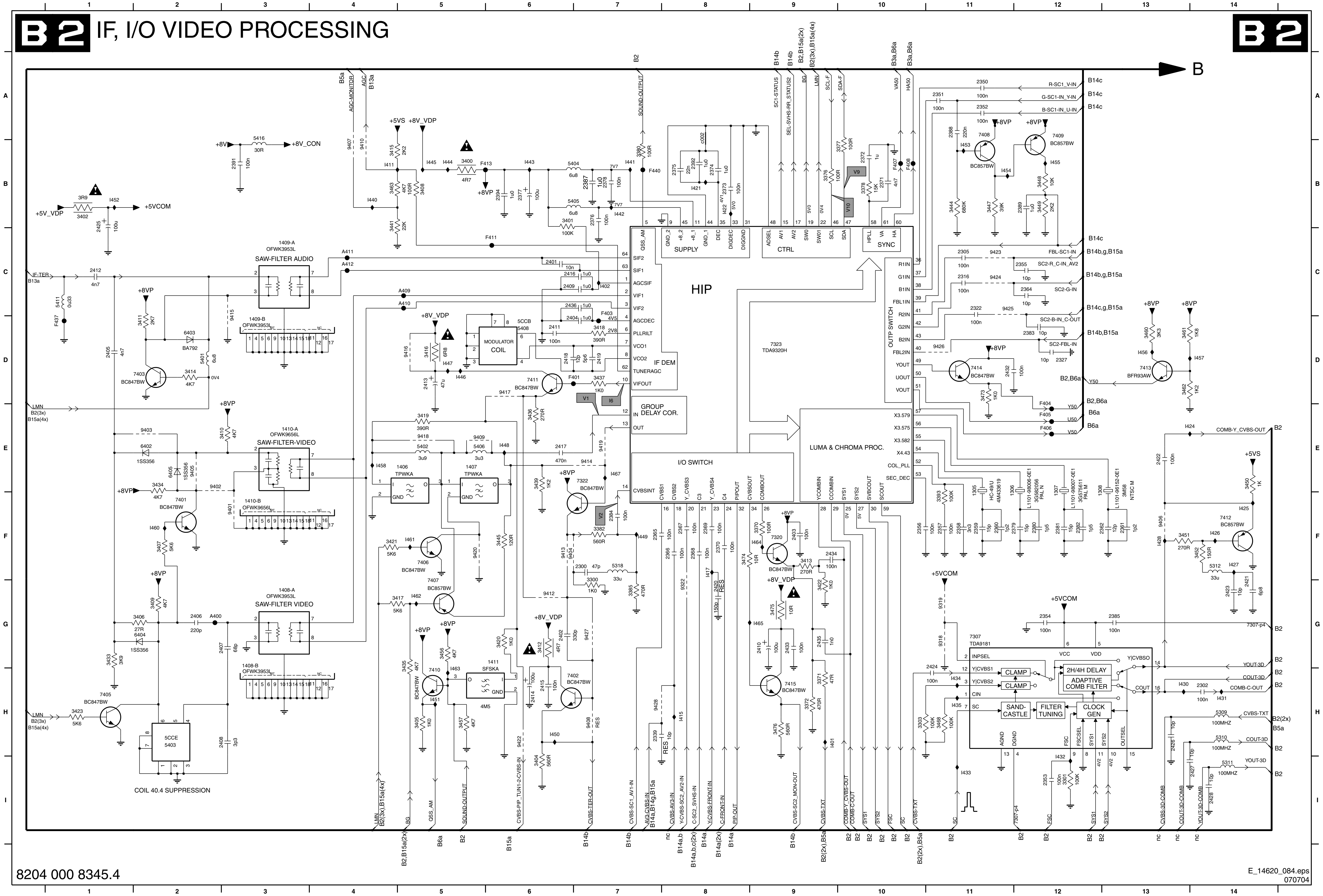
Layout Ambi Light (Bottom Side)

2026	B1	2037	B1	2048	A1	2059	A2	2076	B1	2081	B2	2086	A2	2091	A2
2027	B1	2038	A1	2049	B1	2066	B1	2077	A1	2082	A2	2087	A2		
2028	A1	2039	B1	2056	B2	2067	A2	2078	B1	2083	A2	2088	A2		
2029	B1	2046	A1	2057	A1	2068	A1	2079	A1	2084	A2	2089	B2		
2036	A1	2047	A1	2058	A1	2069	A1	2080	B2	2085	B2	2090	B2		


1
2
A
B
2046
2048
2038
2047
2049
2039
2036
2028
2029
2026
2027
2037
2077
2069
2079
2068
2076
2078
2057
2067
2059
2058
2066
2056
2087
2091
2086
2088
2089
2090
2083
2082
2084
2085
2081
2080
3104 313 6072.4
E_14620_162.eps
131004

SSB: IF, I/O Video Processing

B2 IF, I/O VIDEO PROCESSING

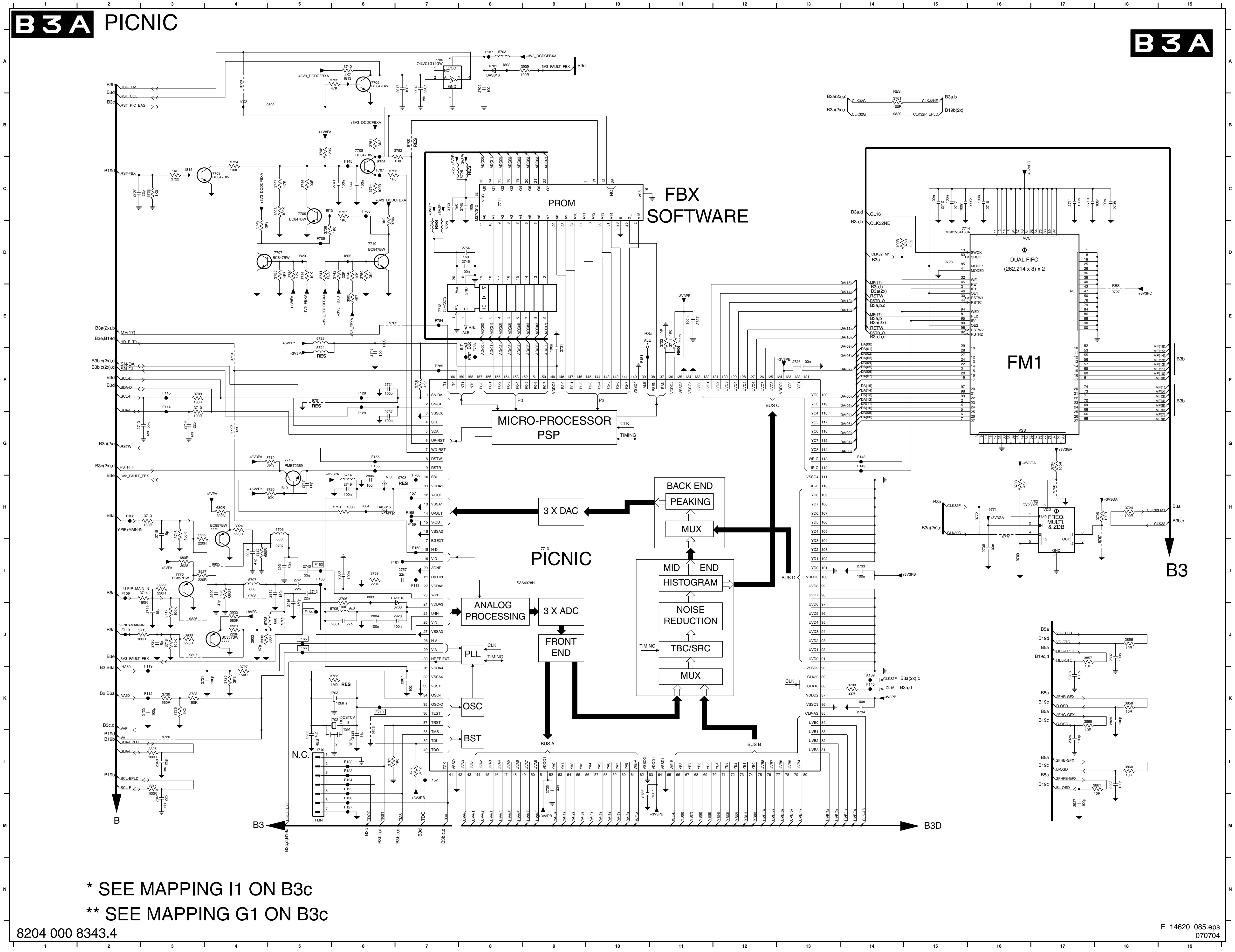

HIP
7323
TDA9320H
SUPPLY
CTRL
SYNC
IF DEM
GROUP DELAY COR.
I/O SWITCH
LUMA & CHROMA PROC.
OUTP SWITCH
SAW-FILTER AUDIO
SAW-FILTER VIDEO
SAW-FILTER-VIDEO
MODULATOR COIL
COIL 40.4 SUPPRESSION
7307
TDA9181
CLAMP
2H/4H DELAY
ADAPTIVE COMB FILTER
SAND-CASTLE
FILTER TUNING
CLOCK GEN
+5V_VDP
+5VCOM
+8V_CON
+8VP
+8V_VDP
+5VS
IF-TER
LMN
SOUND-OUTPUT
AGC-MONITOR
CVBS-TER-OUT
COMB-Y_CVBS-OUT
CVBS-TXT
COUT-3D
YOUT-3D
B

8204 000 8345.4

E_14620_084.eps
070704

1305	E11
1306	E11
1307	E12
1308	E12
1406	E4
1407	E5
1408-A	G3
1408-B	G3
1409-A	C3
1409-B	D3
1410-A	E3
1410-B	F3
1411	G6
2300	F7
2302	H14
2305	C11
2316	C11
2322	C11
2327	D12
2339	H7
2350	A11
2351	A11
2352	A11
2353	I12
2354	G12
2355	C12
2356	F10
2357	F11
2358	F11
2359	F11
2360	F11
2361	F13
2362	F13
2364	C12
2365	F7
2366	F8
2367	F8
2368	F8
2369	F8
2370	F8
2371	B10
2372	B10
2373	B8
2374	B8
2375	B8
2376	B7
2377	B6
2378	B7
2379	F12
2380	F12
2381	F12
2382	F12
2383	D12
2384	F7
2385	G13
2387	B7
2388	A11
2389	B12
2391	B3
2392	B8
2394	B6
2401	C6
2402	G6
2403	F9
2404	D6
2405	D1
2406	G2
2407	G3
2408	H3
2409	C6
2410	G9
2411	D6
2412	C1
2413	D5
2414	H6
2415	H6
2416	C6
2417	E6
2418	D6
2419	D7
2420	G8
2421	G14
2422	E13
2423	G14
2424	H11
2425	B1
2426	H13
2427	I14
2428	I14
2432	D11
2433	G9
2434	F9
2435	G9
2436	C6
3300	G7
3301	I12
3303	H10
3370	F9
3371	H9
3372	H9
3376	B9
3377	B10
3378	B10
3380	B7
3382	F7
3385	G7
3393	F11
3400	B5
3401	B6
3402	B1
3404	I6
3405	H5
3406	G2
3407	F2
3408	B5
3409	G2
3410	E3
3411	D2
3412	G6
3413	F9
3414	D2
3415	B4
3416	D5
3417	G5
3418	D7
3419	E5
3420	G6
3421	F4
3422	G9
3423	H1
3433	G1
3434	E2
3435	G5
3436	E6
3437	D7
3439	E6
3441	B4
3444	B11
3445	F6
3447	B11
3448	B12
3449	B12
3450	E14
3451	F13
3452	F14
3456	G5
3457	H5
3460	D13
3461	D13
3462	D13
3463	B4
3468	H11
3473	D11
3474	F8
3475	G9
3476	H9
5309	H14
5310	H14
5311	I14
5312	F14
5318	F7
5401	D2
5402	E5
5403	H2
5404	B6
5405	B6
5406	E5
5408	D6
5411	C1
5416	B3
6402	E2
6403	D2
6404	G2
6405	E2
7307	G11
7320	F9
7322	E7
7323	D9
7401	F2
7402	H7
7403	D2
7405	H1
7406	F5
7407	G5
7408	A11
7409	A12
7410	H5
7411	D6
7412	F14
7413	D13
7414	D11
7415	H9
9318	G11
9319	G11
9322	G8
9401	F3
9402	E2
9403	E2
9404	F6
9405	E2
9406	F13
9407	B4
9408	H7
9409	E5
9410	B4
9412	G6
9413	F6
9414	E7
9415	C3
9416	D5
9417	D6
9418	E5
9419	E7
9420	F5
9422	H6
9423	C11
9424	C11
9425	C11
9426	D11
9427	G7
9428	H7
A400	G2
A409	C5
A410	C5
A411	C4
A412	C4
F401	D7
F403	C7
F404	E12
F405	E12
F406	E12
F407	B10
F408	B10
F411	C6
F413	B6
F437	D1
F440	B7
I401	H9
I402	C7
I411	B4
I415	H8
I417	F8
I421	B8
I422	B8
I424	E13
I425	F14
I426	F14
I427	F14
I428	F13
I430	H13
I431	H14
I432	I12
I433	I11
I434	H11
I435	H11
I440	B4
I441	B7
I442	B7
I443	B6
I444	B5
I445	B5
I446	D5
I447	D5
I448	E6
I449	F7
I450	H6
I451	H5
I452	B1
I453	B11
I454	B11
I455	B12
I456	D13
I457	D14
I458	E4
I460	F2
I461	F5
I462	G5
I463	H5
I464	F9
I465	G9
I467	E7
c002	A8

SSB: PICNIC


B3A
PICNIC
B3A
FBX SOFTWARE
PROM
MICRO-PROCESSOR PSP
3 X DAC
BACK END
PEAKING
MUX
PICNIC
7713
SAA4978H
MID
END
HISTOGRAM
NOISE REDUCTION
TBC/SRC
MUX
ANALOG PROCESSING
3 X ADC
FRONT END
PLL
OSC
BST
N.C.
BUS A
BUS B
BUS C
BUS D
FM1
DUAL FIFO
(262,214 x 8) x 2
7714
MS81V04160A
7702
CY2302S
FREQ. MULTI. & ZDB
CLK
TIMING
B3
B3D
B
E_14620_085.eps
070704

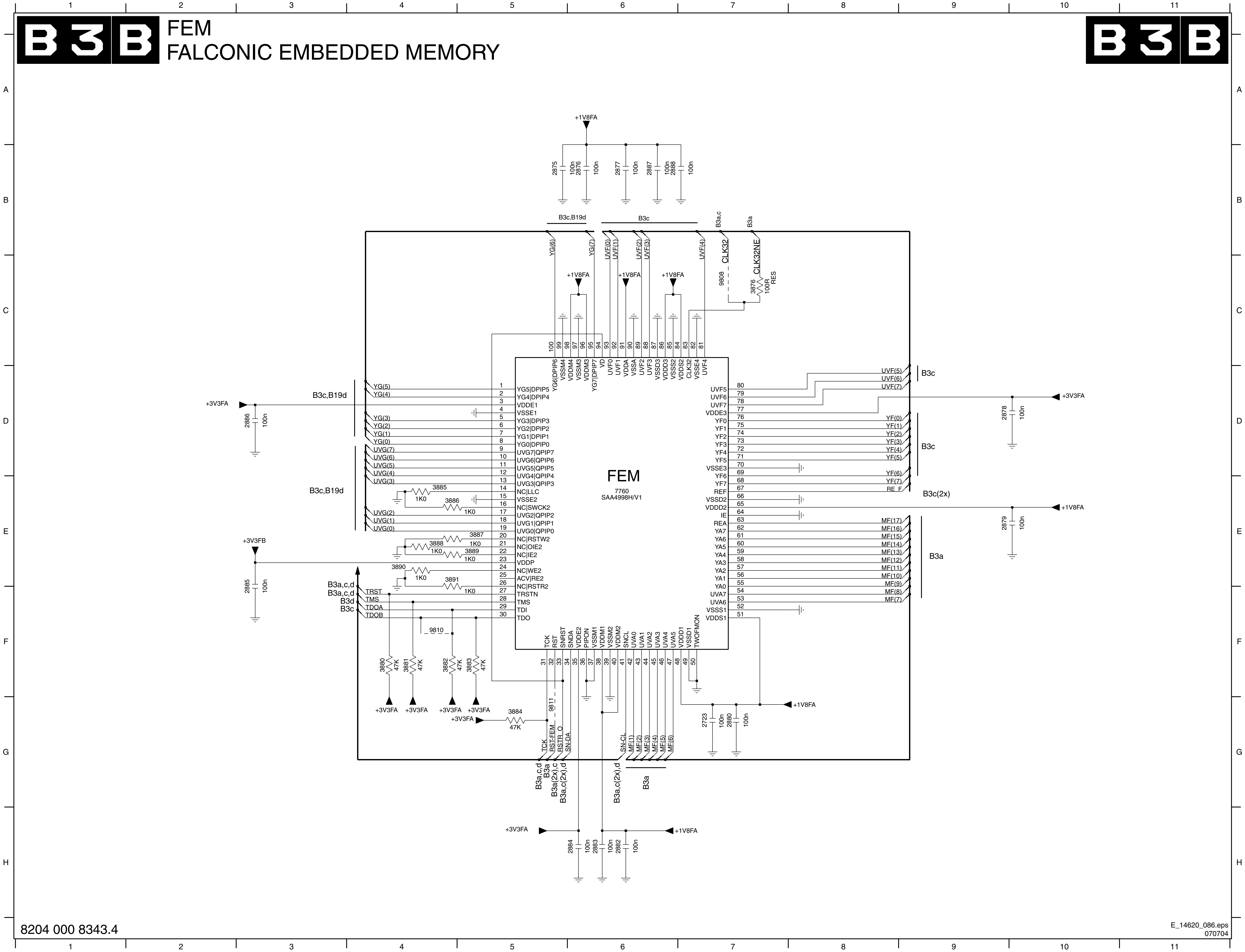
* SEE MAPPING I1 ON B3c

** SEE MAPPING G1 ON B3c

8204 000 8343.4

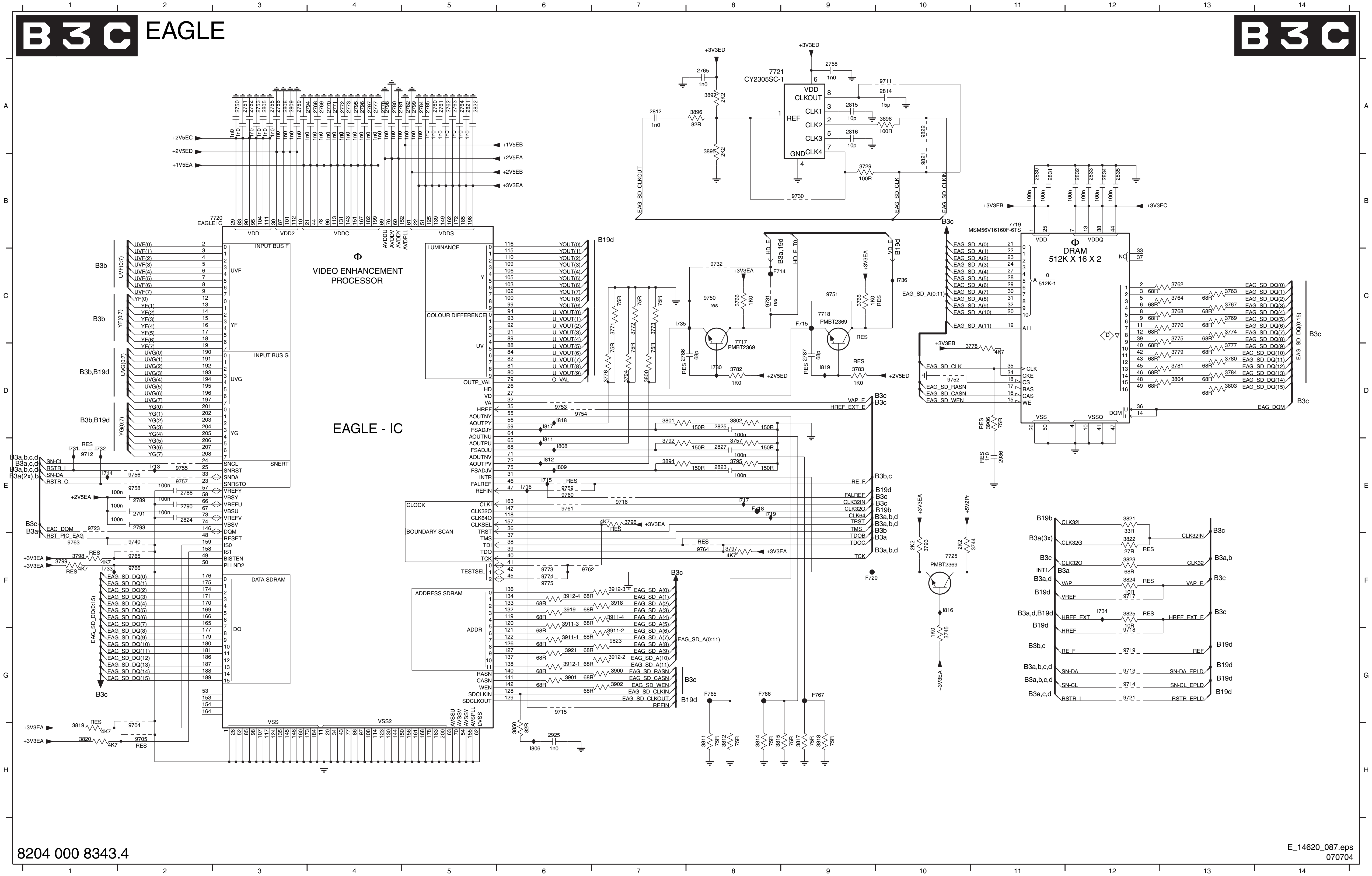
1702	K6
1703	K6
1710	L5
2707	C2
2708	I16
2709	A8
2710	C17
2711	C17
2712	C15
2713	G2
2714	G3
2716	C16
2717	C15
2718	H3
2719	J3
2720	J3
2721	K3
2722	K3
2724	F6
2725	C16
2726	F13
2727	E11
2731	F9
2732	C7
2733	I14
2734	K14
2735	L9
2736	M10
2737	G6
2738	C18
2740	I5
2741	I5
2742	I5
2743	C6
2744	C6
2745	C8
2746	D8
2747	H5
2748	F6
2749	H6
2754	D8
2757	I7
2800	I6
2804	J6
2806	H6
2807	K7
2837	J18
2838	K17
2839	K18
2840	L3
2841	M3
2881	J6
2900	I4
2901	I4
2902	J4
2915	I5
2916	J5
2917	A7
2918	A7
2920	J7
2926	L17
2927	M17
2928	L18
2929	L6
2931	I5
2935	L5
3700	K14
3701	L6
3702	E11
3703	H16
3704	G17
3705	H18
3706	I6
3709	F3
3710	F3
3711	E11
3712	L7
3713	H3
3714	I3
3715	J3
3716	H3
3717	J3
3718	J3
3719	G5
3720	H5
3721	H6
3722	C3
3723	K6
3724	H18
3725	K4
3726	K3
3727	K4
3728	K3
3730	K3
3732	A6
3733	C3
3734	C4
3736	C5
3737	C6
3738	D5
3739	D5
3740	A6
3741	D5
3742	D6
3743	D6
3746	D6
3747	C5
3748	B5
3749	D4
3750	D6
3751	B6
3752	B7
3753	C6
3754	C6
3755	D5
3756	D5
3758	F7
3759	I6
3760	D15
3761	B14
3826	L3
3827	L3
3856	J18
3857	J17
3858	K18
3859	K17
3860	L18
3861	L18
3903	C5
3905	E6
3909	A9
3922	H3
3923	H4
3924	H4
3925	I4
3926	I4
3927	I3
3928	I3
3929	I3
3930	J3
3931	J4
3932	J4
3933	J4
5703	A8
5705	J6
5706	H5
5707	I4
5708	J4
5714	H6
5723	E5
5724	F5
5725	C8
5726	C7
5727	D7
5728	D7
6701	A8
6703	J7
6710	H6
7702	H17
7703	C4
7705	A6
7706	A7
7707	D5
7708	B6
7709	C5
7710	D6
7711	C8
7712	E7
7713	I9
7714	D16
7715	G5
7775	H4
7776	I3
7777	J4
9700	B7
9701	F5
9702	E6
9703	H7
9706	L6
9707	I5
9708	I4
9709	J5
9710	F4
9720	L3
9726	G4
9727	E18
9728	D15
9729	A4
9767	I18
9768	H17
9769	I16
9770	H16
9771	H16
9772	H16
9809	B5
9820	B14
9825	I4
9826	J3
9827	J3
A139	K14
F107	A8
F108	H2
F109	I2
F110	J2
F112	K3
F114	F3
F115	F3
F118	I7
F119	K3
F122	L6
F123	L6
F124	L6
F125	L6
F126	M6
F127	M6
F128	F6
F129	G6
F140	K14
F145	C6
F148	G14
F149	G14
F151	F10
F152	L7
F155	G6
F156	G6
F157	H7
F158	H7
F159	H7
F160	I7
F161	I6
F162	I5
F163	I5
F164	J5
F165	J5
F166	J5
F706	C6
F707	C6
F708	C6
F709	D5
F710	K6
F784	E7
F785	F7
F786	E8
F787	F8
F788	H7
I720	B4
I727	H6
I802	A8
I803	I6
I804	H6
I805	D6
I810	H5
I813	A6
I814	C3
I815	C5
I820	D5

SSB: (FEM) Falconic Embedded Memory


B3B
FEM
FALCONIC EMBEDDED MEMORY
B3B
FEM
7760
SAA4998H/V1
+1V8FA
2875
100n
2876
100n
2877
100n
2887
100n
2888
100n
B3c,B19d
B3c
B3a,c
B3a
CLK32
CLK32NE
9808
3876
100R
RES
YG(6)
YG(7)
UVF(0)
UVF(1)
UVF(2)
UVF(3)
UVF(4)
+3V3FA
2886
100n
B3c,B19d
YG(5)
YG(4)
YG(3)
YG(2)
YG(1)
YG(0)
UVG(7)
UVG(6)
UVG(5)
UVG(4)
UVG(3)
UVG(2)
UVG(1)
UVG(0)
3885
1K0
3886
1K0
3887
1K0
3888
1K0
3889
1K0
3890
1K0
3891
1K0
+3V3FB
2885
100n
B3a,c,d
B3a,c,d
B3d
B3c
TRST
TMS
TDOA
TDOB
9810
3880
47K
3881
47K
3882
47K
3883
47K
3884
47K
9811
+3V3FA
YG5|DPIP5
YG4|DPIP4
VDDE1
VSSE1
YG3|DPIP3
YG2|DPIP2
YG1|DPIP1
YG0|DPIP0
UVG7|QPIP7
UVG6|QPIP6
UVG5|QPIP5
UVG4|QPIP4
UVG3|QPIP3
NC|LLC
VSSE2
NC|SWCK2
UVG2|QPIP2
UVG1|QPIP1
UVG0|QPIP0
NC|RSTW2
NC|OIE2
NC|IE2
VDDP
NC|WE2
ACV|RE2
NC|RSTR2
TRSTN
TMS
TDI
TDO
YG6|DPIP6
VSSM4
VDDM4
VSSM3
VDDM3
YG7|DPIP7
VD
UVF0
UVF1
VDDA
VSSA
UVF2
UVF3
VSSD3
VDDD3
VSSS2
VDDS2
CLK32
VSSE4
UVF4
UVF5
UVF6
UVF7
VDDE3
YF0
YF1
YF2
YF3
YF4
YF5
VSSE3
YF6
YF7
REF
VSSD2
VDDD2
IE
REA
YA7
YA6
YA5
YA4
YA3
YA2
YA1
YA0
UVA7
UVA6
VSSS1
VDDS1
TCK
RST
SNRST
SNDA
VDDE2
PIPON
VSSM1
VDDM1
VSSM2
VDDM2
SNCL
UVA0
UVA1
UVA2
UVA3
UVA4
UVA5
VDDD1
VSSD1
TWOFMON
UVF(5)
UVF(6)
UVF(7)
B3c
2878
100n
YF(0)
YF(1)
YF(2)
YF(3)
YF(4)
YF(5)
YF(6)
YF(7)
RE_F
B3c(2x)
+1V8FA
2879
100n
MF(17)
MF(16)
MF(15)
MF(14)
MF(13)
MF(12)
MF(11)
MF(10)
MF(9)
MF(8)
MF(7)
B3a
2723
100n
2880
100n
TCK
RST-FEM
RSTR_O
SN-DA
SN-CL
MF(1)
MF(2)
MF(3)
MF(4)
MF(5)
MF(6)
B3a,c,d
B3a
B3a(2x),d
B3a,c(2x),d
B3a,c(2x),d
B3a
2884
100n
2883
100n
2882
100n
8204 000 8343.4
E_14620_086.eps
070704

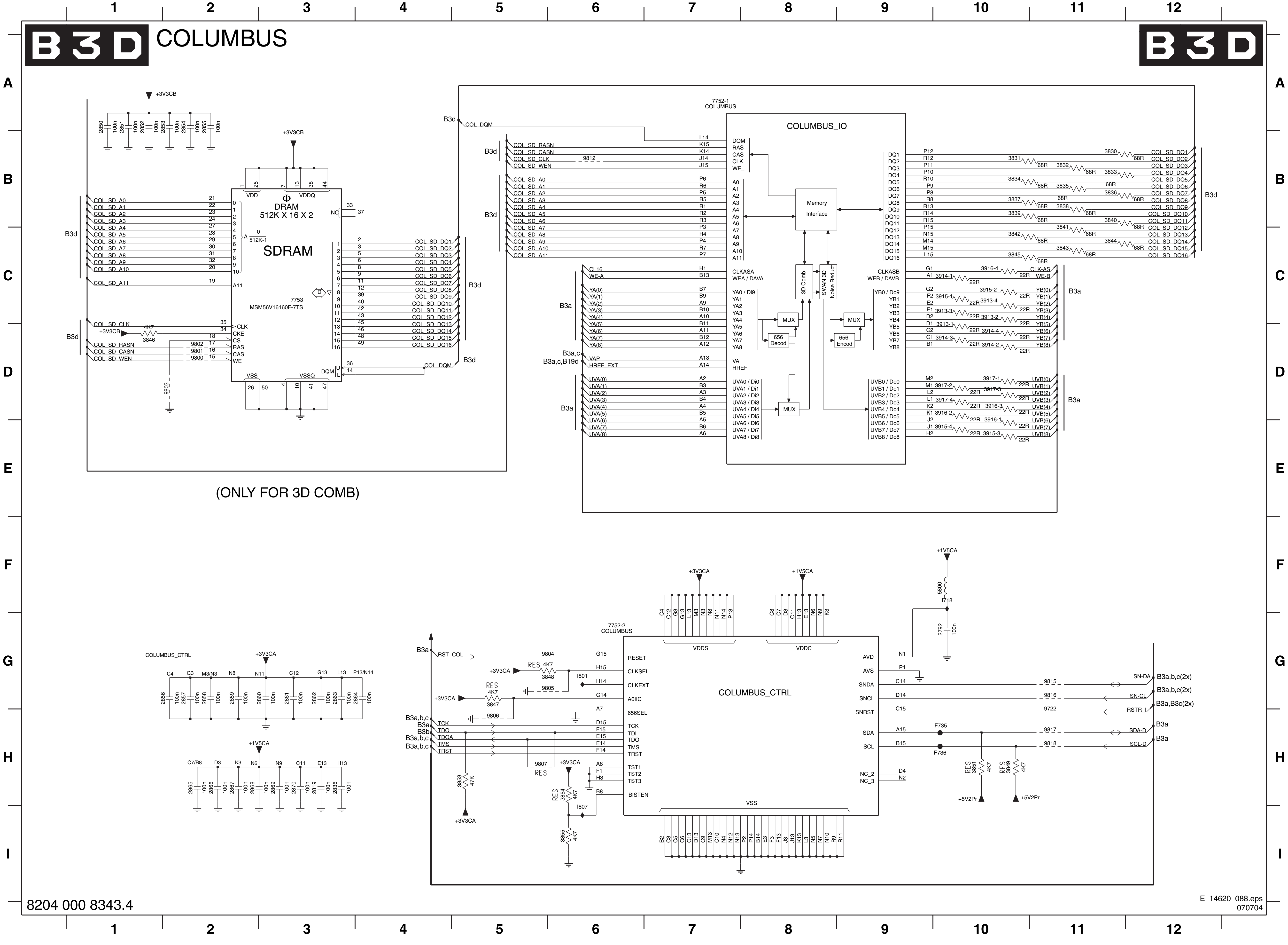
2723	G7
2875	B5
2876	B6
2877	B6
2878	D9
2879	E9
2880	G7
2882	H6
2883	H6
2884	H6
2885	E3
2886	D3
2887	B6
2888	B6
3876	C7
3880	F4
3881	F4
3882	F4
3883	F5
3884	G5
3885	E4
3886	E4
3887	E5
3888	E4
3889	E5
3890	E4
3891	E4
7760	E6
9808	C7
9810	F4
9811	G5

SSB: Eagle


B3C
EAGLE
B3C
EAGLE - IC
7720
EAGLE1C
VIDEO ENHANCEMENT PROCESSOR
INPUT BUS F
INPUT BUS G
LUMINANCE
COLOUR DIFFERENCE
CLOCK
BOUNDARY SCAN
DATA SDRAM
ADDRESS SDRAM
SNERT
VDD
VDD2
VDDC
VDDS
VSS
VSS2
UVF
YF
UVG
YG
DQ
ADDR
7721
CY2305SC-1
VDD
CLKOUT
REF
CLK1
CLK2
CLK3
CLK4
GND
7719
MSM56V16160F-6TS
DRAM
512K X 16 X 2
7717
PMBT2369
7718
PMBT2369
7725
PMBT2369
+3V3ED
+3V3EA
+3V3EB
+3V3EC
+2V5EC
+2V5ED
+1V5EA
+1V5EB
+2V5EA
+2V5EB
+5V2Pr
EAG_SD_A(0:11)
EAG_SD_DQ(0:15)
EAG_SD_CLKOUT
EAG_SD_CLKIN
EAG_SD_CLK
EAG_SD_RASN
EAG_SD_CASN
EAG_SD_WEN
EAG_DQM
B3a
B3b
B3c
B19d
8204 000 8343.4
E_14620_087.eps
070704

2750	A3	3802	D8	I732	E1
2751	A3	3803	D13	I733	F1
2752	A3	3804	D13	I734	F12
2753	A3	3811	H8	I735	C7
2755	A3	3812	H8	I736	C10
2756	A3	3814	H8	I806	H6
2758	A9	3815	H8	I808	E6
2759	A3	3817	H9	I809	E6
2760	A5	3818	H9	I811	E6
2761	A5	3819	H1	I812	E6
2762	A5	3820	H1	I816	F10
2763	A5	3821	E12	I817	D6
2764	A5	3822	F12	I818	D6
2765	A8	3823	F12	I819	D9
2768	A4	3824	F12		
2769	A4	3825	F12		
2770	A4	3850	H6		
2771	A4	3894	E7		
2772	A4	3895	A8		
2773	A4	3896	A8		
2777	A4	3897	A8		
2778	A4	3898	A10		
2780	A4	3900	G7		
2781	A4	3901	G6		
2782	A5	3902	G7		
2784	A5	3906	D11		
2785	A5	3911-1	G6		
2786	D7	3911-2	G7		
2787	D9	3911-3	F6		
2788	E2	3911-4	F7		
2789	E2	3912-1	G6		
2790	E2	3912-2	G7		
2791	E2	3912-3	F7		
2793	E2	3912-4	F6		
2794	A4	3918	F7		
2795	A4	3919	F6		
2796	A4	3921	G6		
2797	A4	7717	D8		
2798	A4	7718	C9		
2799	A5	7719	B11		
2805	A3	7720	B3		
2808	A3	7721	A9		
2809	A3	7725	F10		
2812	A7	9704	H2		
2814	A10	9705	H2		
2815	A9	9711	A10		
2816	A9	9712	E1		
2821	A5	9713	G12		
2822	A5	9714	G12		
2823	E8	9715	G6		
2824	E2	9716	E7		
2825	D8	9717	F12		
2827	E8	9718	G12		
2830	B11	9719	G12		
2831	B11	9721	G12		
2832	B12	9723	E1		
2833	B12	9730	B9		
2834	B12	9731	C8		
2835	B12	9732	C8		
2925	H6	9740	F2		
2936	E11	9750	C8		
3729	B9	9751	C9		
3744	F11	9752	D10		
3745	G10	9753	D6		
3757	E8	9754	D6		
3762	C13	9755	E2		
3763	C13	9756	E2		
3764	C13	9757	E2		
3765	C9	9758	E2		
3766	C8	9759	E6		
3767	C13	9760	E6		
3768	C13	9761	E6		
3769	C13	9762	F6		
3770	C13	9763	F1		
3771	C7	9764	F8		
3772	C7	9765	F2		
3773	C7	9766	F2		
3774	C13	9773	F6		
3775	C13	9774	F6		
3776	D7	9775	F6		
3777	D13	9821	B10		
3778	D11	9822	A10		
3779	D13	9823	G7		
3780	D13	F714	C8		
3781	D13	F715	C9		
3782	D8	F718	E8		
3783	D9	F720	F9		
3784	D13	F765	G8		
3792	E7	F766	G8		
3793	F10	F767	G9		
3794	D7	I713	E2		
3795	E8	I714	E1		
3796	E7	I715	E6		
3797	F8	I716	E6		
3798	F1	I717	E8		
3799	F1	I719	E8		
3800	D7	I730	D8		
3801	D7	I731	E1		

SSB: Columbus

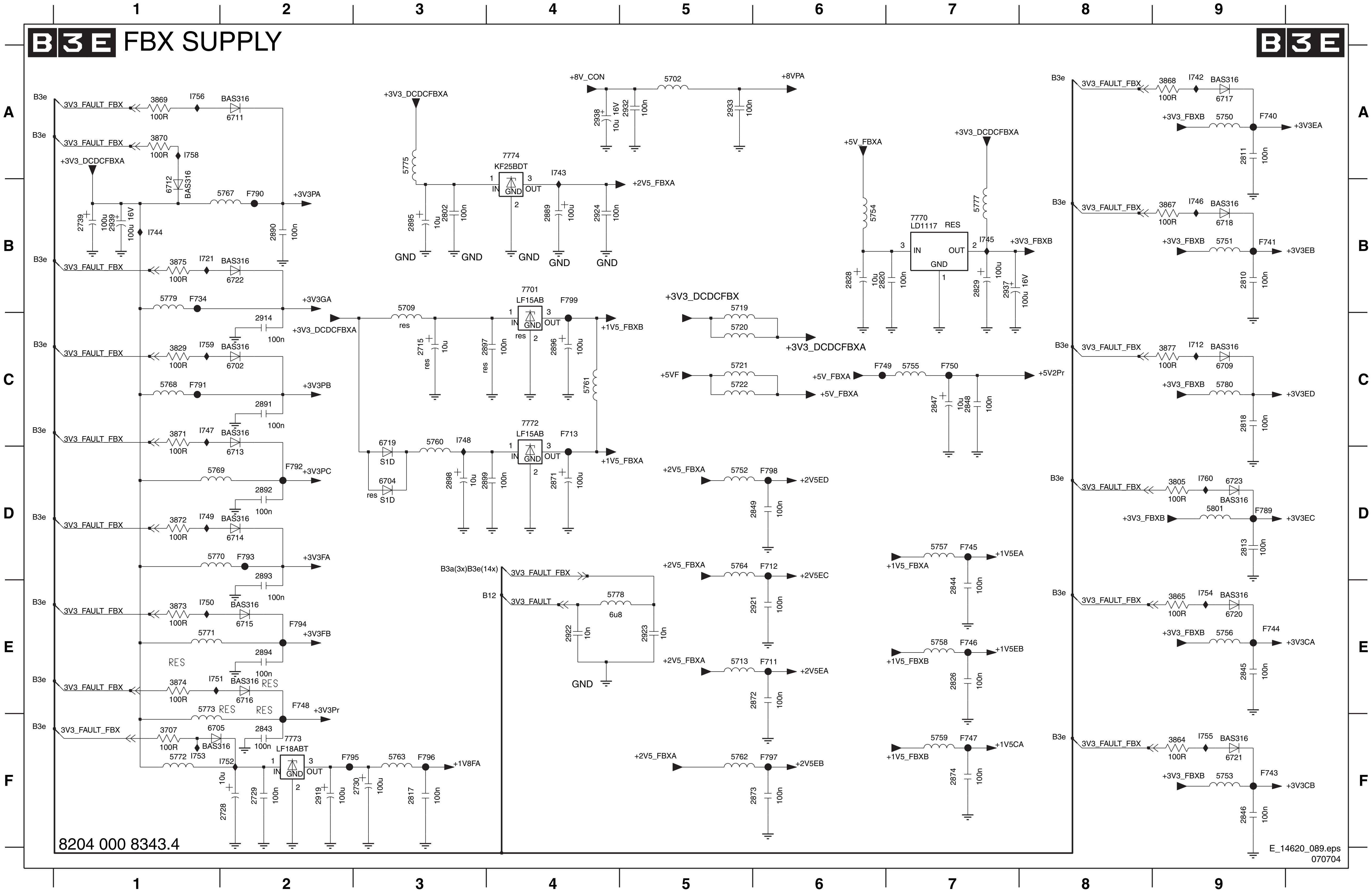

B3D
COLUMBUS
B3D
1 2 3 4 5 6 7 8 9 10 11 12
A B C D E F G H I
+3V3CB
DRAM 512K X 16 X 2
SDRAM
7753
MSM56V16160F-7TS
COL_SD_A0 … COL_SD_A11
COL_SD_DQ1 … COL_SD_DQ16
COL_SD_CLK
COL_SD_RASN
COL_SD_CASN
COL_SD_WEN
COL_DQM
B3d
(ONLY FOR 3D COMB)
7752-1
COLUMBUS
COLUMBUS_IO
Memory Interface
3D Comb
SWAN 3D Noise Reduct
MUX
656 Decod
656 Encod
B3a
B3a,c
B3a,c,B19d
7752-2
COLUMBUS
COLUMBUS_CTRL
COLUMBUS_CTRL
+3V3CA
+1V5CA
VDDS
VDDC
VSS
RESET
CLKSEL
CLKEXT
A0IIC
656SEL
TCK
TDI
TDO
TMS
TRST
TST1
TST2
TST3
BISTEN
AVD
AVS
SNDA
SNCL
SNRST
SDA
SCL
NC_2
NC_3
RST_COL
SN-DA
SN-CL
RSTR_I
SDA-D
SCL-D
B3a,b,c(2x)
B3a,B3c(2x)
+5V2Pr
F735
F736
I718
I801
I807

8204 000 8343.4

E_14620_088.eps
070704

2792	G10
2819	H3
2836	H3
2850	A1
2851	A1
2852	A1
2853	A2
2854	A2
2855	A2
2856	G2
2857	G2
2858	G2
2859	G2
2860	G3
2861	G3
2862	G3
2863	G3
2864	G4
2865	H2
2866	H2
2867	H2
2868	H2
2869	H3
2870	H3
3830	B11
3831	B10
3832	B11
3833	B11
3834	B10
3835	B11
3836	B11
3837	B10
3838	B11
3839	B10
3840	B11
3841	C11
3842	C10
3843	C11
3844	C11
3845	C10
3846	D1
3847	G5
3848	G6
3849	H10
3851	H10
3853	H5
3854	H6
3855	I6
3913-1	D10
3913-2	C10
3913-3	C10
3913-4	C10
3914-1	C10
3914-2	D10
3914-3	D10
3914-4	D10
3915-1	C10
3915-2	C10
3915-3	E10
3915-4	E10
3916-1	E10
3916-2	D10
3916-3	D10
3916-4	C10
3917-1	D10
3917-2	D10
3917-3	D10
3917-4	D10
5800	F10
7752-1	A7
7752-2	G6
7753	C3
9722	H11
9800	D2
9801	D2
9802	D2
9803	D2
9804	G6
9805	G6
9806	H5
9807	H5
9812	B6
9815	G11
9816	G11
9817	H11
9818	H11
F735	H10
F736	H10
I718	F10
I801	G6
I807	I6

SSB: FBX Supply


B3E FBX SUPPLY
B3E
1 2 3 4 5 6 7 8 9
A B C D E F
B3e
3V3_FAULT_FBX
3869 100R
I756
BAS316 6711
3870 100R
I758
+3V3_DCDCFBXA
6712 BAS316
5767
F790
+3V3PA
2739 100u
2939 100u 16V
I744
2890 100n
3875 100R
I721
BAS316 6722
5779
F734
+3V3GA
2914 100n
3829 100R
I759
BAS316 6702
5768
F791
+3V3PB
2891 100n
3871 100R
I747
BAS316 6713
5769
F792
+3V3PC
2892 100n
3872 100R
I749
BAS316 6714
5770
F793
+3V3FA
2893 100n
3873 100R
I750
BAS316 6715
5771
F794
+3V3FB
2894 100n
RES
3874 100R
I751
BAS316 6716
5773
F748
+3V3Pr
3707 100R
6705 BAS316
I753
2843 100n
7773 LF18ABT
5772
I752
F795
5763
F796
+1V8FA
2728 10u
2729 100n
2919 100u
2730 100u
2817 100n
8204 000 8343.4
5775
7774 KF25BDT
I743
+2V5_FBXA
2895 10u
2802 100n
2889 100u
2924 100n
GND
IN OUT GND
5709 res
7701 LF15AB
F799
+1V5_FBXB
2715 10u res
2897 100n res
2896 100u
5761
6719 S1D
6704 S1D res
5760
I748
7772 LF15AB
F713
+1V5_FBXA
2898 10u
2899 100n
2871 100u
B3a(3x)B3e(14x)
B12
3V3_FAULT
5778 6u8
2922 10n
2923 10n
+8V_CON
5702
+8VPA
2938 10u 16V
2932 100n
2933 100n
+3V3_DCDCFBX
5719
5720
+3V3_DCDCFBXA
+5VF
5721
5722
+5V_FBXA
+2V5_FBXA
5752
F798
+2V5ED
2849 100n
5764
F712
+2V5EC
2921 100n
5713
F711
+2V5EA
2872 100n
5762
F797
+2V5EB
2873 100n
+5V_FBXA
5754
7770 LD1117 RES
5777
I745
+3V3_FBXB
2828 10u
2820 100n
2829 10u
2937 100u 16V
F749
5755
F750
+5V2Pr
2847 10u
2848 100n
+1V5_FBXA
5757
F745
+1V5EA
2844 100n
+1V5_FBXB
5758
F746
+1V5EB
2826 100n
5759
F747
+1V5CA
2874 100n
3868 100R
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BAS316 6717
5750
F740
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3867 100R
I746
BAS316 6718
5751
F741
+3V3EB
2810 100n
3877 100R
I712
BAS316 6709
5780
+3V3ED
2818 100n
3805 100R
I760
6723 BAS316
5801
F789
+3V3EC
2813 100n
3865 100R
I754
BAS316 6720
5756
F744
+3V3CA
2845 100n
3864 100R
I755
BAS316 6721
5753
F743
+3V3CB
2846 100n
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070704

2715	C3
2728	F2
2729	F2
2730	F3
2739	B1
2802	B3
2810	B9
2811	A9
2813	D9
2817	F3
2818	C9
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2826	E7
2828	B6
2829	B7
2843	F2
2844	E7
2845	E9
2846	F9
2847	C7
2848	C7
2849	D6
2871	D4
2872	E6
2873	F6
2874	F7
2889	B4
2890	B2
2891	C2
2892	D2
2893	D2
2894	E2
2895	B3
2896	C4
2897	C4
2898	D3
2899	D4
2914	C2
2919	F2
2921	E6
2922	E4
2923	E5
2924	B4
2932	A5
2933	A5
2937	B7
2938	A4
2939	B1
3707	F1
3805	D9
3829	C1
3864	F9
3865	E9
3867	B9
3868	A9
3869	A1
3870	A1
3871	C1
3872	D1
3873	E1
3874	E1
3875	B1
3877	C9
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5709	B3
5713	E5
5719	B5
5720	C5
5721	C5
5722	C5
5750	A9
5751	B9
5752	D5
5753	F9
5754	B6
5755	C7
5756	E9
5757	D7
5758	E7
5759	F7
5760	C3
5761	C4
5762	F5
5763	F3
5764	D5
5767	B2
5768	C1
5769	D1
5770	D1
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5773	E1
5775	A3
5777	B7
5778	E4
5779	B1
5780	C9
5801	D9
6702	C2
6704	D3
6705	F1
6709	C9
6711	A2
6712	B1
6713	D2
6714	D2
6715	E2
6716	E2
6717	A9
6718	B9
6719	C3
6720	E9
6721	F9
6722	B2
6723	D9
7701	B4
7770	B7
7772	C4
7773	F2
7774	A4
F711	E6
F712	D6
F713	C4
F734	B1
F740	A9
F741	B9
F743	F9
F744	E9
F745	D7
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F749	C6
F750	C7
F789	D9
F790	B2
F791	C1
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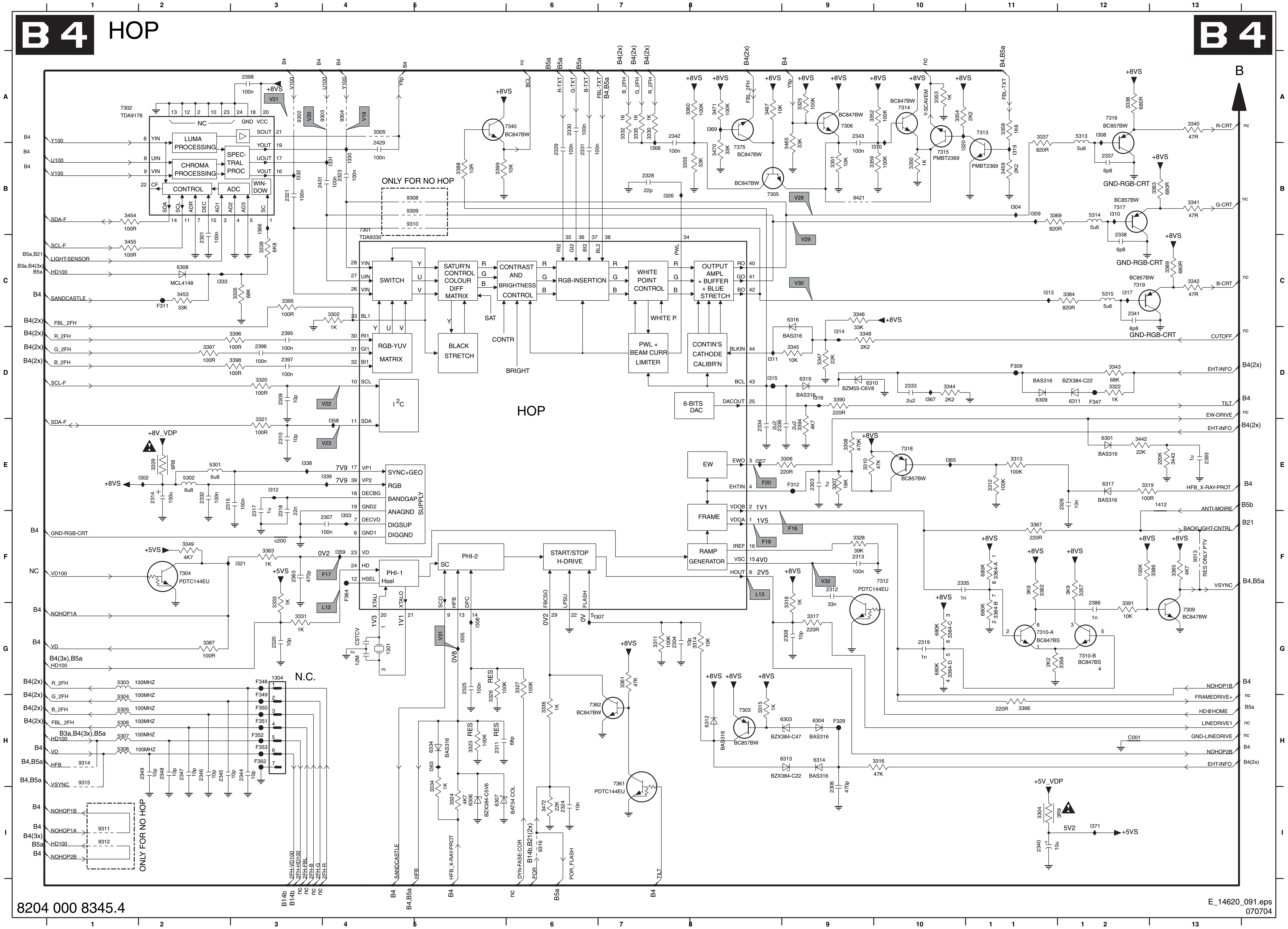
F793	D2
F794	E2
F795	F2
F796	F3
F797	F6
F798	D6
F799	B4
I712	C9
I721	B1
I742	A9
I743	A4
I744	B1
I745	B7
I746	B9
I747	C1
I748	C3
I749	D1
I750	E1
I751	E1
I752	F2
I753	F1
I754	E9
I755	F9
I756	A1
I758	A1
I759	C1
I760	D9

SSB: HOP


B4
HOP
B4
7302 TDA9178
LUMA PROCESSING
CHROMA PROCESSING
SPEC-TRAL PROC
CONTROL
ADC
WIN-DOW
NC
GND VCC
SOUT
YOUT
UOUT
VOUT
YIN
UIN
VIN
CF
SDA SCL ADR DEC AD1 AD2 AD3 SC
ONLY FOR NO HOP
9308
9309
9310
7301 TDA9330
SWITCH
SATUR'N CONTROL COLOUR DIFF MATRIX
CONTRAST AND BRIGHTNESS CONTROL
RGB-INSERTION
WHITE POINT CONTROL
OUTPUT AMPL + BUFFER + BLUE STRETCH
RGB-YUV MATRIX
BLACK STRETCH
PWL + BEAM CURR LIMITER
CONTIN'S CATHODE CALIBR'N
WHITE P.
SAT
CONTR
BRIGHT
I²C
HOP
6-BITS DAC
EW
FRAME
RAMP GENERATOR
SYNC+GEO
RGB
BANDGAP
ANAGND
DIGSUP
DIGGND
DECBG
SUPPLY
PHI-2
PHI-1 Hsel
START/STOP H-DRIVE
N.C.
ONLY FOR NO HOP
+8VS
+5VS
+8V_VDP
+5V_VDP
5V2
GND-RGB-CRT
R-CRT
G-CRT
B-CRT
CUTOFF
EHT-INFO
TILT
EW-DRIVE
HFB_X-RAY-PROT
ANTI-MOIRE
BACKLIGHT-CNTRL
VSYNC
NOHOP1B
FRAMEDRIVE+
HD@HOME
LINEDRIVE1
GND-LINEDRIVE
NOHOP2B
SDA-F
SCL-F
LIGHT-SENSOR
HD100
SANDCASTLE
FBL_2FH
R_2FH
G_2FH
B_2FH
VD100
NOHOP1A
VD
HFB
Y100
U100
V100
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7306 BC847BW
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7313 PMBT2369
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7312 PDTC144EU
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7362 BC847BW
7303 BC857BW
7309 BC847BW
7310-A BC847BS
7310-B BC847BS
1301 12M
CSTCV
1304
V19 V20 V21 V22 V23 V28 V29 V30 V31 V32
F17 F18 F19 F20
L12 L13
RES ONLY PTV
8204 000 8345.4
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070704

1301 G4
1304 G3
1412 E13
2301 C2
2303 E9
2304 G7
2306 I9
2307 F4
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2309 D3
2310 E3
2311 H5
2312 F9
2313 F9
2314 E2
2315 E2
2317 F3
2318 F3
2319 G10
2320 G3
2321 B3
2323 B4
2324 I6
2325 G5
2326 E12
2328 B7
2329 B6
2330 A6
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2332 E2
2333 D10
2334 E8
2335 F10
2336 E8
2337 B12
2338 C12
2340 I11
2341 C12
2342 A7
2343 A9
2344 H3
2345 H2
2346 H2
2347 H2
2348 H2
2349 H2
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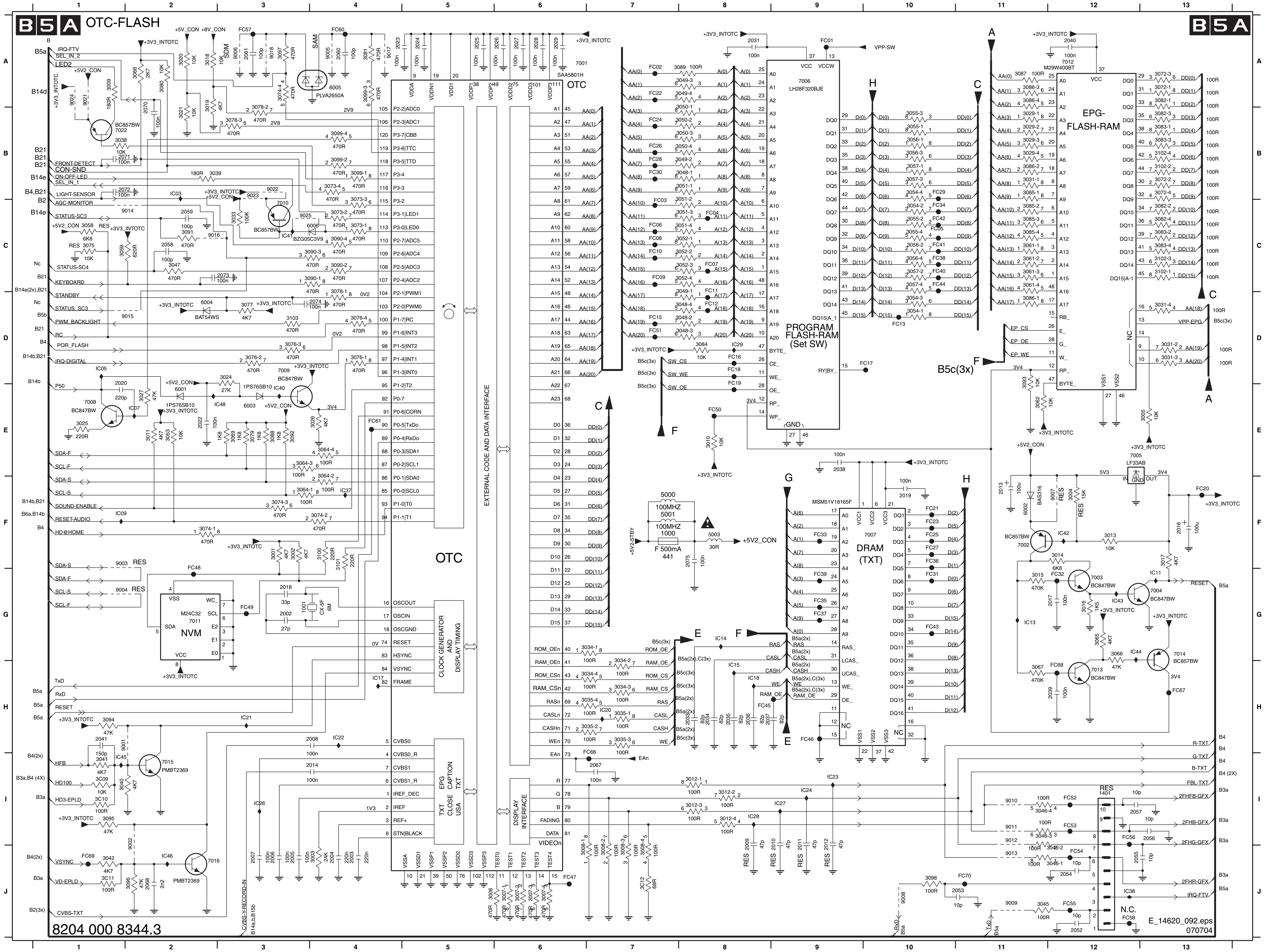
2393 E13
2395 D3
2396 D3
2397 D3
2398 A3
2429 B4
2431 B3
3302 C4
3304 I11
3305 C3
3306 E9
3307 E9
3308 E9
3310 E9
3311 G7
3312 E11
3313 E11
3314 G8
3315 H8
3316 H10
3317 G9
3318 F9
3319 E12
3320 D3
3321 E3
3322 D12
3323 H5
3324 I5
3325 A9
3326 H5
3327 G6
3328 F9
3329 E2
3330 A7
3331 G3
3332 A7
3333 F3
3334 H5
3335 A7
3336 H6
3337 A11
3338 A12
3339 C3
3340 A13
3341 B13
3342 C13
3343 D12
3344 D10
3345 D9
3346 C9
3347 D9
3348 D9
3349 F2
3350 B10
3351 B9
3352 A9
3353 A10
3354 A10
3355 B7
3356 G12
3357 F12
3358 A11
3359 B9
3360 A7
3361 G7
3362 F11
3363 F3
3364-A F11
3364-B G11
3364-C G10
3364-D G10
3365 F13
3366 H11
3367 F11
3369 B11
3383 B13
3384 C12
3386 F13
3387 G2
3388 B5
3389 C13
3390 D9
3391 G12
3394 E9
3395 C3
3396 D3
3397 D2
3398 D3
3399 B5
3442 E12
3443 E13
3453 C2
3454 B1
3455 C1
3459 B11
3465 B9
3467 A8
3470 B8
3471 A8
3472 I6
5301 E2
5302 E2
5303 G1
5304 H1
5305 H1
5306 H1
5307 H1
5308 H1
5313 A12
5314 B12
5315 C12
6301 E12
6303 H9
6304 H9
6306 I5
6307 I5
6308 C2
6309 D11
6310 D9
6311 D12
6312 H8
6313 H9
6314 H9
6316 C9
6317 E12
6319 D9
6334 H5
7301 B4
7302 A1
7303 H8
7304 F2
7305 B8
7306 A9
7309 G13
7310-A G11
7310-B G12
7312 F10
7313 A11
7314 A10
7315 B10
7316 A12
7317 B12
7318 E10
7319 C12
7340 A5
7361 H7
7362 H7
7375 B8
9302 A3
9303 A4
9304 A4
9305 A4
9308 B4
9309 B4
9310 B4
9311 I1
9312 I1
9313 F13
9314 H1
9315 H1
9316 I6
9421 B9
C001 H12
F309 D11
F311 C2
F312 E9
F329 H9
F347 D12
F348 G3
F349 H3
F350 H3
F351 H3
F352 H3
F353 H3
F362 H3
F364 F4
I302 E2
I303 F4
I304 B11
I305 G5
I306 G5
I307 G7
I308 A12
I309 B11
I310 B12
I311 D8
I312 E3
I313 C11
I314 D9
I315 D8
I316 D9
I317 C12
I319 B11
I320 B10
I321 F3
I326 B7
I330 B4
I331 B4
I332 B3
I333 C2
I338 E3
I339 E4
I357 E8
I358 E4
I359 F4
I363 H5
I365 E10
I366 B3
I367 D10
I368 B7
I369 A8
I370 B10
I371 I12
c200 F3

SSB: OTC-Flash


B5A
OTC-FLASH
OTC
SAA5801H
7001
EXTERNAL CODE AND DATA INTERFACE
CLOCK GENERATOR AND DISPLAY TIMING
TXT CLOSE CAPTION USA EPG TXT
DISPLAY INTERFACE
PROGRAM FLASH-RAM (Set SW)
7006
LH28F320BJE
EPG-FLASH-RAM
7012
M29W400BT
DRAM (TXT)
7007
MSM51V18165F
NVM
7011
M24C32
7005
LF33AB
BC857BW
BC847BW
PMBT2369
BAT54WS
1PS76SB10
BZG05C3V9
PLVA2650A
+3V3_INTOTC
+5V2_CON
+5V_CON
+8V_CON
VPP-SW
VPP-EPG
RESET
FRONT-DETECT
CON-SND
ON-OFF-LED
SEL_IN_1
SEL_IN_2
LED2
IRQ-FTV
LIGHT-SENSOR
AGC-MONITOR
STATUS-SC3
STATUS-SC4
KEYBOARD
STANDBY
PWM_BACKLIGHT
RC
POR_FLASH
IRQ-DIGITAL
P50
SDA-F
SCL-F
SDA-S
SCL-S
SOUND-ENABLE
RESET-AUDIO
HD@HOME
TxD
RxD
HFB
HD100
HD3-EPLD
VSYNC
VD-EPLD
CVBS-TXT
R-TXT
G-TXT
B-TXT
FBL-TXT
2FHFB-GFX
2FHB-GFX
2FHG-GFX
2FHR-GFX
IRQ-FTV
N.C.
RES
1401
F 500mA 441
100MHZ
+5V2-STBY
8204 000 8344.3
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070704

1000 F7
1001 G3
1401 I12
2002 G3
2003 J4
2004 J4
2005 J3
2006 J3
2007 J3
2008 H4
2009 I8
2010 I9
2011 I9
2012 I9
2013 F11
2014 I4
2016 F13
2017 G12
2018 G3
2019 F10
2020 E1
2022 E2
2023 A4
2024 A5
2025 A5
2026 A6
2027 A6
2028 A6
2029 A6
2031 A8
2033 H8
2034 H8
2035 H8
2036 H8
2037 H8
2038 E9
2039 H12
2040 A12
2041 H1
2052 J12
2053 J11
2054 J12
2055 J12
2056 I13
2057 I12
2058 C2
2059 C2
2060 A4
2061 A3
2067 I7
2068 J2
2070 B2
2071 B1
2072 B1
2073 C3
2074 D4
2075 F8
3001 F3
3002 F3
3003 J4
3004 F12
3005 E13
3006 J5
3007-1 J6
3007-2 J6
3007-3 J6
3007-4 J6
3008-1 J6
3008-2 J7
3008-3 J7
3008-4 J7
3009 A1
3010 E8
3011 E2
3012-1 I8
3012-2 I8
3012-3 I8
3012-4 I8
3013 F12
3014 F12
3015 G11
3016 G12
3017 F13
3018 A2
3019 A2
3020 A2
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3024 D3
3025 E1
3026 E4
3027 E2
3029-1 B11
3029-2 B11
3029-3 B11
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3031-3 D13
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3034-4 H7
3035-1 H7
3035-2 H7
3035-3 H7
3035-4 H7
3038 B1
3039 B2
3040 I1
3041 I1
3042 J1
3045 J11
3046-1 J12
3046-2 J12
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3046-4 I11
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3048-1 B8
3048-2 D8
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3051-4 C8
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3101 F4
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3102-4 B13
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3C11 J1
3C12 J7
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6003 E3
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6005 A4
6006 C4
7001 A6
7002 F11
7003 G12
7004 G13
7005 E12
7006 A9
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9004 G1
9005 A4
9006 A3
9007 F12
9008 J10
9009 J11
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9011 I11
9012 I11
9013 J11
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9016 C2
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9024 A1
9025 C3
FC01 A9
FC02 A7
FC03 C7
FC04 C8
FC05 C10
FC06 C7
FC07 C8
FC08 C7
FC09 C7
FC10 C7
FC11 D8
FC12 D8
FC13 D10
FC15 D7
FC16 D8
FC17 D10
FC18 D8
FC19 E8
FC20 F13
FC21 F10
FC22 A7
FC23 F10
FC24 B7
FC25 F10
FC26 B7
FC27 F10
FC28 B7
FC29 B10
FC30 B7
FC31 G10
FC32 G12
FC33 F9
FC34 C10
FC35 G9
FC36 F10
FC37 G9
FC38 C10
FC39 G9
FC40 C10
FC41 C10
FC42 C10
FC43 G10
FC44 C10
FC45 H8
FC46 H9
FC47 J6
FC48 G2
FC49 G3
FC50 E8
FC51 D7
FC52 I12
FC53 I12
FC54 J12
FC55 J12
FC56 I12
FC57 A3
FC58 J12
FC60 A4
FC61 E4
FC66 I7
FC67 H13
FC68 H12
FC69 J1
FC70 J11
IC03 B2
IC05 D1
IC07 E2
IC09 F1
IC11 G13
IC13 G11
IC14 G8
IC15 H8
IC17 H4
IC18 H8
IC20 H7
IC21 H3
IC22 H4
IC23 I9
IC24 I9
IC26 I3
IC27 I9
IC28 I8
IC29 D8
IC37 F4
IC38 J12
IC40 E3
IC41 C3
IC42 F12
IC43 G12
IC44 G12
IC45 I1
IC46 J2
IC48 E3

SSB: Backlight Control

2063	C3
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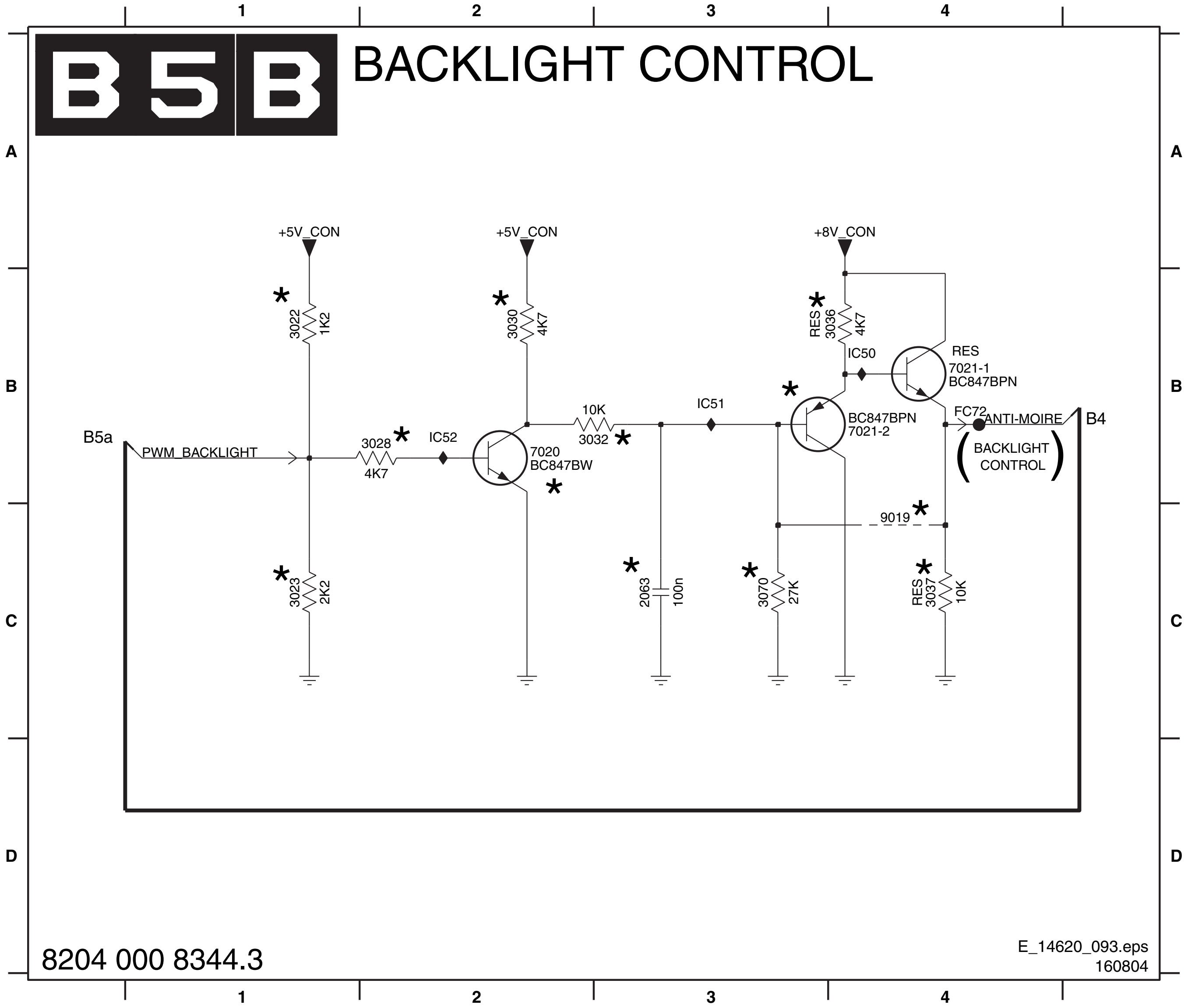
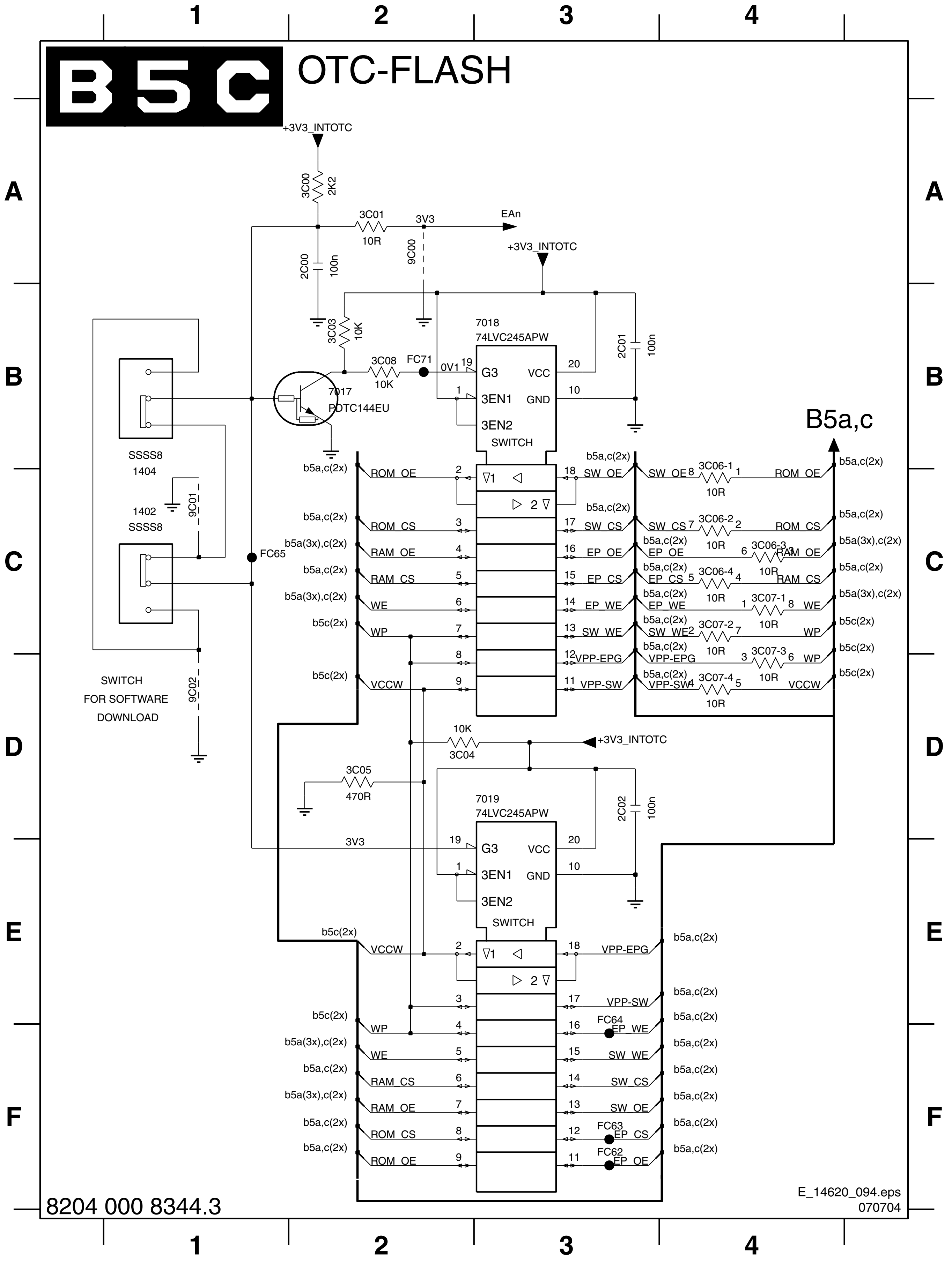
3023	C1
3028	B2
3030	B2
3032	B2
3036	B4
3037	C4
3070	C3
7020	B2
7021-1	B4
7021-2	B4
9019	C4
FC72	B4
IC50	B4
IC51	B3
IC52	B2



B5B
BACKLIGHT CONTROL
+5V_CON
+5V_CON
+8V_CON
3022 1K2
3030 4K7
RES 3036 4K7
IC50
RES 7021-1 BC847BPN
10K 3032
IC51
BC847BPN 7021-2
FC72
ANTI-MOIRE
B4
B5a
PWM_BACKLIGHT
3028 4K7
IC52
7020 BC847BW
BACKLIGHT CONTROL
9019
3023 2K2
2063 100n
3070 27K
RES 3037 10K
8204 000 8344.3
E_14620_093.eps
160804

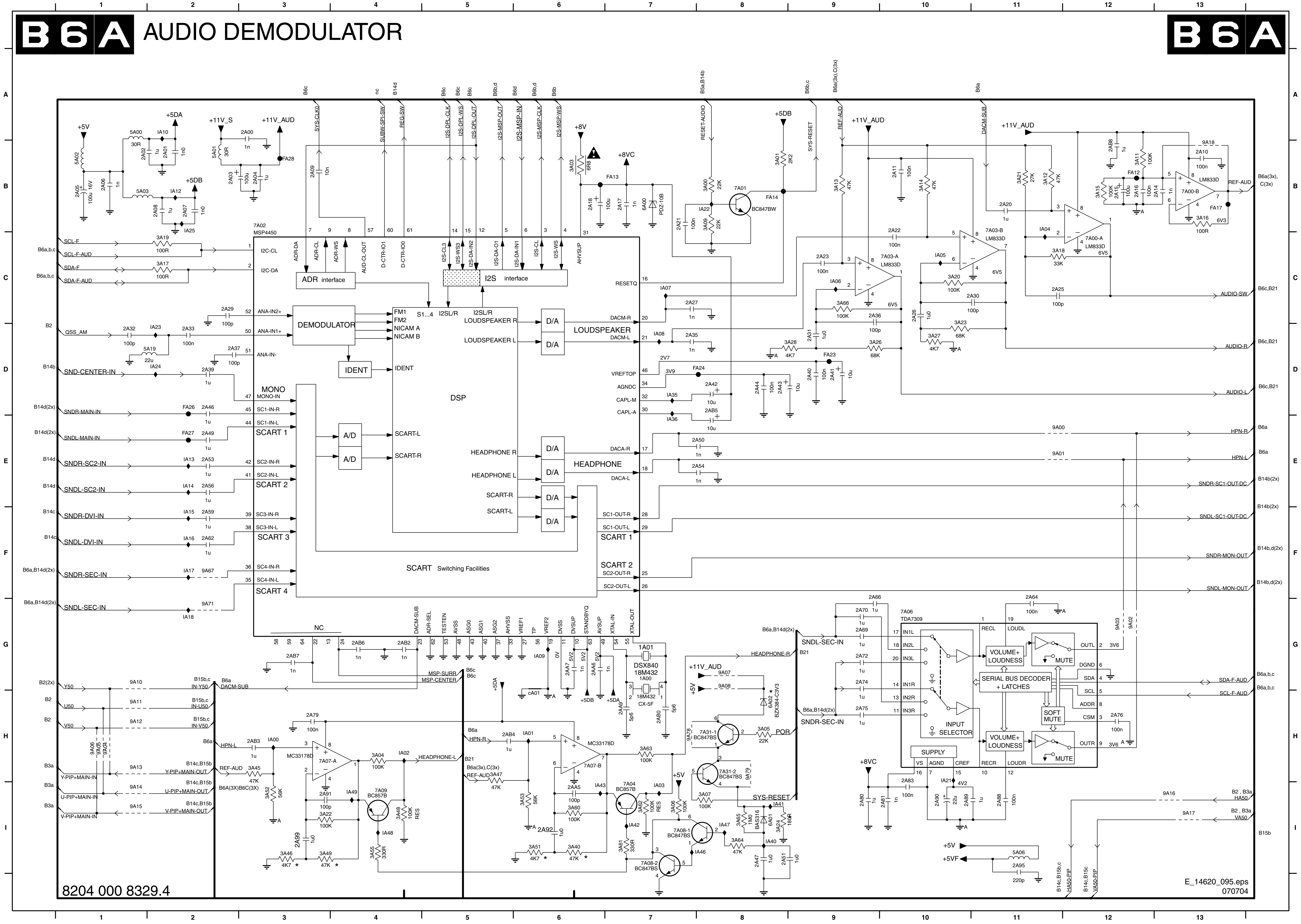
SSB: OTC-Flash

1402	C1
1404	B1
2C00	A2
2C01	B3
2C02	D3
3C00	A2
3C01	A2
3C03	B2
3C04	D2
3C05	D2
3C06-1	C4
3C06-2	C4
3C06-3	C4
3C06-4	C4
3C07-1	C4
3C07-2	C4
3C07-3	D4
3C07-4	D4
3C08	B2
7017	B2
7018	B3
7019	D3
9C00	A2
9C01	C1
9C02	D1
FC62	F3
FC63	F3
FC64	E3
FC65	C1
FC71	B2



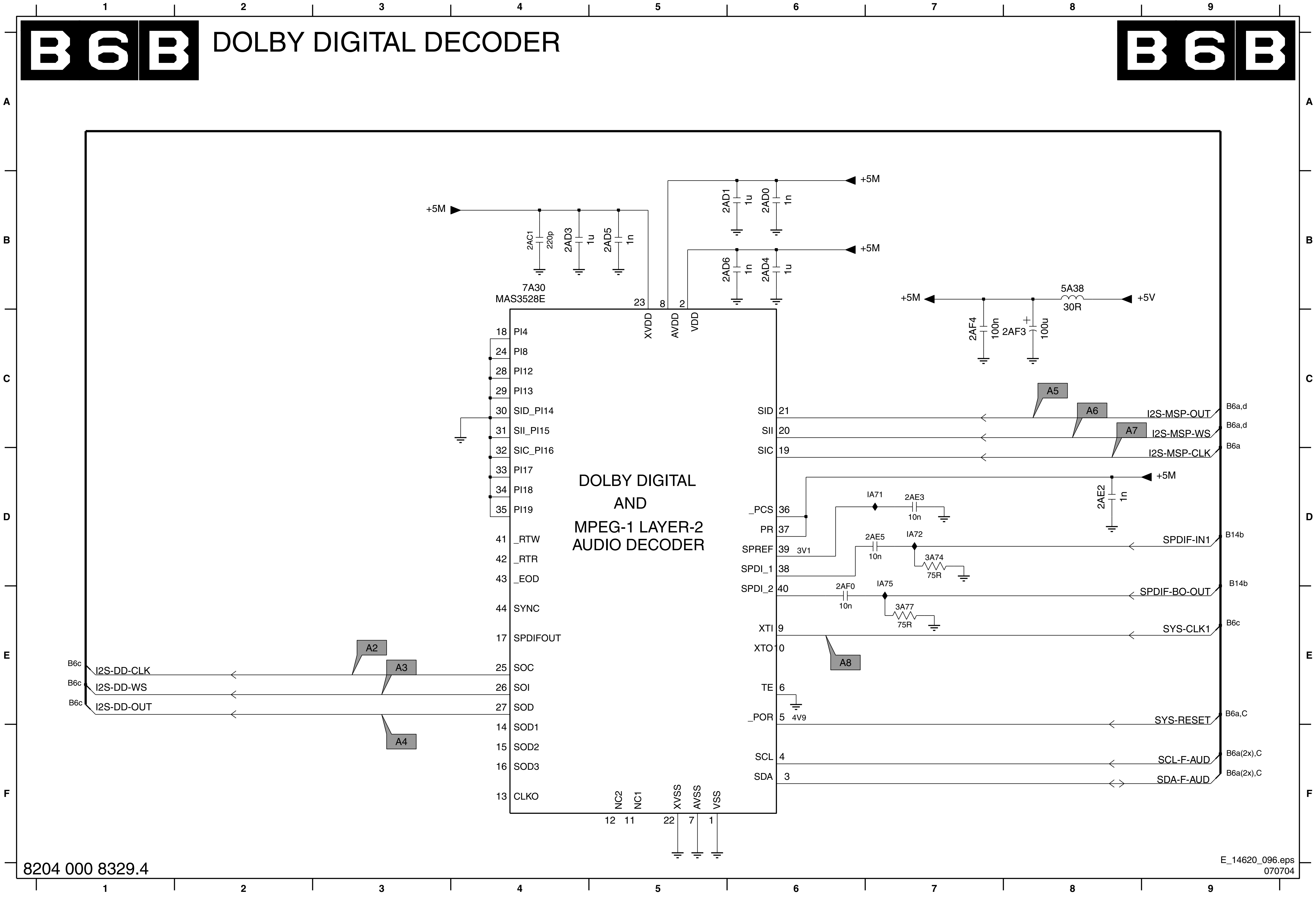
B5C
OTC-FLASH
+3V3_INTOTC
3C00 2K2
3C01 10R
3V3
EAn
9C00
2C00 100n
+3V3_INTOTC
3C03 10K
3C08 10K
FC71
0V1
7017 PDTC144EU
7018 74LVC245APW
G3
3EN1
3EN2
SWITCH
VCC
GND
2C01 100n
B5a,c
SSSS8 1404
SSSS8 1402
9C01
FC65
ROM_OE
ROM_CS
RAM_OE
RAM_CS
WE
WP
VCCW
SW_OE
SW_CS
EP_OE
EP_CS
EP_WE
SW_WE
VPP-EPG
VPP-SW
3C06-1 10R
3C06-2 10R
3C06-3 10R
3C06-4 10R
3C07-1 10R
3C07-2 10R
3C07-3 10R
3C07-4 10R
b5a,c(2x)
b5a(3x),c(2x)
b5c(2x)
SWITCH FOR SOFTWARE DOWNLOAD
9C02
10K 3C04
+3V3_INTOTC
3C05 470R
7019 74LVC245APW
2C02 100n
3V3
FC64
FC63
FC62
8204 000 8344.3
E_14620_094.eps
070704

SSB: Audio Demodulator


B6A
AUDIO DEMODULATOR
B6A
7A02
MSP4450
ADR interface
I2S interface
DEMODULATOR
FM1
FM2
NICAM A
NICAM B
IDENT
DSP
LOUDSPEAKER R
LOUDSPEAKER L
LOUDSPEAKER
D/A
A/D
HEADPHONE R
HEADPHONE L
HEADPHONE
SCART-R
SCART-L
MONO
SCART 1
SCART 2
SCART 3
SCART 4
SCART Switching Facilities
NC
7A06
TDA7309
VOLUME+ LOUDNESS
SERIAL BUS DECODER + LATCHES
INPUT SELECTOR
SOFT MUTE
MUTE
SUPPLY
7A00-A LM833D
7A00-B LM833D
7A03-A LM833D
7A03-B LM833D
7A07-A MC33178D
7A07-B MC33178D
7A01 BC847BW
7A04 BC857B
7A09 BC857B
7A31-1 BC847BS
7A31-2 BC847BS
7A08-1 BC847BS
7A08-2 BC847BS
1A01 DSX840 18M432
1A00 18M432 CX-5F
+5V
+5DA
+5DB
+8V
+8VC
+11V_S
+11V_AUD
+5VF
SCL-F
SCL-F-AUD
SDA-F
SDA-F-AUD
QSS_AM
SND-CENTER-IN
SNDR-MAIN-IN
SNDL-MAIN-IN
SNDR-SC2-IN
SNDL-SC2-IN
SNDR-DVI-IN
SNDL-DVI-IN
SNDR-SEC-IN
SNDL-SEC-IN
Y50
U50
V50
Y-PIP+MAIN-IN
U-PIP+MAIN-IN
V-PIP+MAIN-IN
AUDIO-SW
AUDIO-R
AUDIO-L
HPN-R
HPN-L
SNDR-SC1-OUT-DC
SNDL-SC1-OUT-DC
SNDR-MON-OUT
SNDL-MON-OUT
REF-AUD
HEADPHONE-L
HEADPHONE-R
SYS-RESET
POR
RES
8204 000 8329.4
E_14620_095.eps
070704

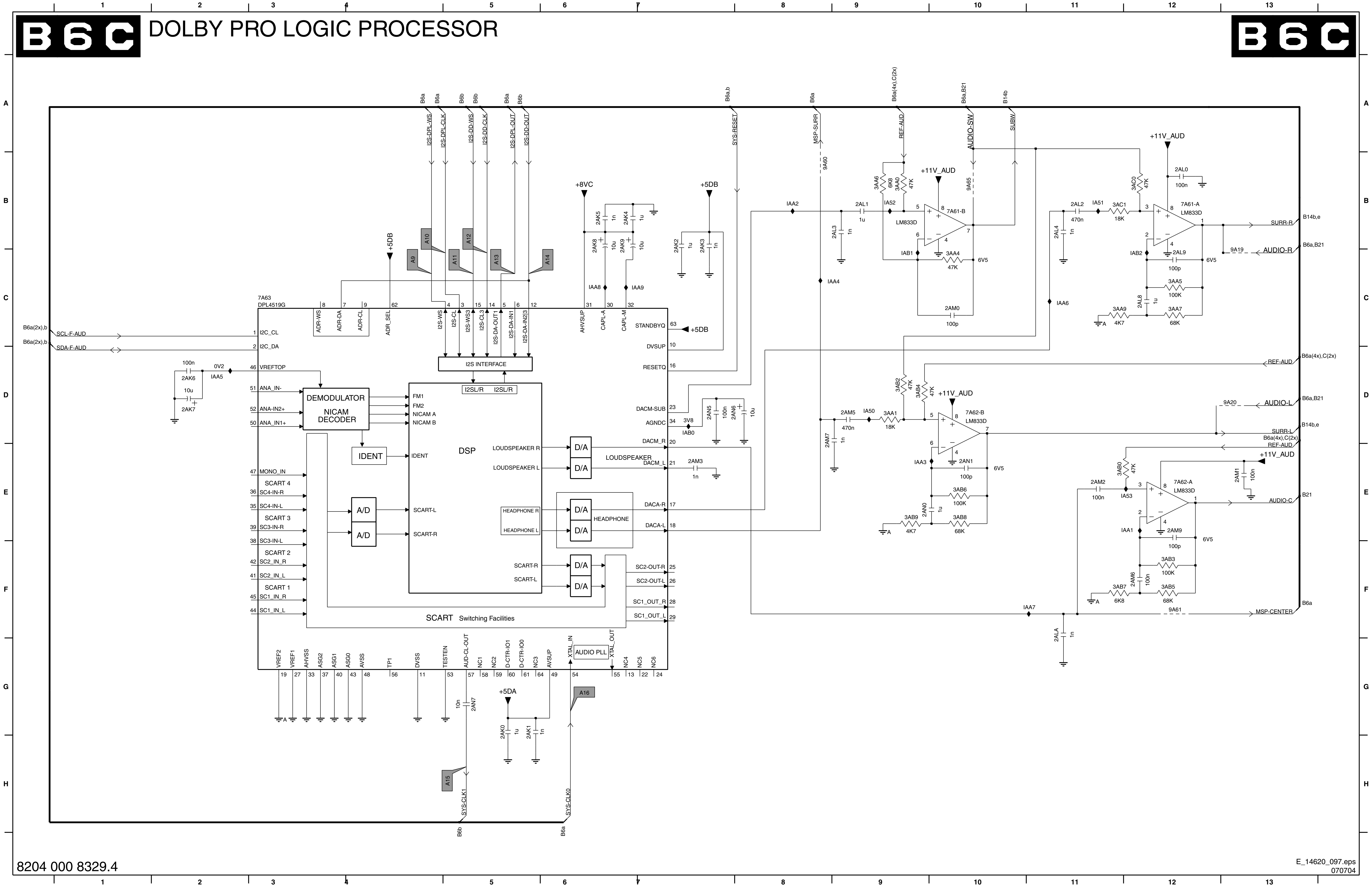
1A00	G7
1A01	G7
2A00	A3
2A01	B2
2A02	B1
2A03	B2
2A04	B3
2A05	B1
2A06	B1
2A07	B2
2A08	B2
2A09	B3
2A10	B13
2A11	B10
2A14	B13
2A15	B12
2A16	B12
2A17	B7
2A18	B6
2A20	B11
2A21	B7
2A22	C10
2A23	C9
2A25	C11
2A26	C10
2A27	C7
2A29	C2
2A30	C11
2A31	D9
2A32	D1
2A33	D2
2A35	D7
2A36	C9
2A37	D2
2A39	D2
2A40	D9
2A41	D9
2A42	D8
2A43	D8
2A44	D8
2A46	D2
2A47	I8
2A49	E2
2A50	E8
2A51	I8
2A53	E2
2A54	E8
2A56	E2
2A59	F2
2A62	F2
2A64	G11
2A66	G9
2A69	G9
2A70	G9
2A72	G9
2A74	G9
2A75	H9
2A76	H12
2A79	H3
2A80	I9
2A81	I10
2A83	I10
2A88	I11
2A89	I10
2A90	I10
2A91	I3
2A92	I6
2A95	I11
2A99	I3
2AA5	I6
2AA6	G6
2AA7	G6
2AA9	H7
2AB0	H7
2AB2	G4
2AB3	H3
2AB4	H5
2AB5	D8
2AB6	G4
2AB7	G3
2AB8	B12
3A00	B8
3A01	B8
3A03	B6
3A04	H4
3A05	H8
3A06	I7
3A07	I8
3A09	B8
3A11	B12
3A12	B11
3A13	B9
3A14	B10
3A15	B12
3A16	B13
3A17	C2
3A18	C11
3A19	C2
3A20	C10
3A21	B11
3A22	I3
3A23	D10
3A24	I8
3A26	D9
3A27	D10
3A28	D9
3A40	I6
3A45	H3
3A46	I3
3A47	H5
3A48	I4
3A49	I3
3A51	I6
3A52	I3
3A53	I6
3A55	I4
3A60	I6
3A61	I7
3A62	I7
3A63	H7
3A64	I8
3A65	I8
3A66	C9
5A00	A1
5A01	B2
5A02	B1
5A03	B1
5A06	I11
5A19	D2
6A00	B7
6A01	I8
6A02	H8
7A00-A	C12
7A00-B	B13
7A01	B8
7A02	B3
7A03-A	C10
7A03-B	C11
7A04	I7
7A06	G10
7A07-A	H3
7A07-B	H6
7A08-1	I7
7A08-2	I7
7A09	I4
7A31-1	H8
7A31-2	H8
9A00	E11
9A01	E11
9A02	G12
9A03	G12
9A04	H1
9A05	H1
9A06	H1
9A07	G8
9A08	G8
9A10	G1
9A11	H1
9A12	H1
9A13	H1
9A14	I1
9A15	I1
9A16	I13
9A17	I13
9A18	B13
9A67	F2
9A71	G2
9A78	H7
9A79	H8
FA12	B12
FA13	B7
FA14	B8
FA17	B13
FA23	D9
FA24	D8
FA26	D2
FA27	E2
FA28	B3
IA00	H3
IA01	H6
IA02	H4
IA03	I7
IA04	B11
IA05	C10
IA06	C9
IA07	C7
IA08	D7
IA09	G6
IA10	A2
IA12	B2
IA13	E2
IA14	E2
IA15	F2
IA16	F2
IA17	F2
IA18	G2
IA21	I10
IA22	B8
IA23	D2
IA24	D2
IA25	C2
IA35	D7
IA36	E7
IA40	I8
IA41	I8
IA42	I7
IA43	I6
IA46	I8
IA47	I8
IA48	I4
IA49	I4
cA01	H6

SSB: Dolby Digital Decoder


B6B
DOLBY DIGITAL DECODER
B6B
7A30
MAS3528E
DOLBY DIGITAL
AND
MPEG-1 LAYER-2
AUDIO DECODER
+5M
2AC1 220p
2AD3 1u
2AD5 1n
2AD1 1u
2AD0 1n
2AD6 1n
2AD4 1u
+5M
5A38 30R
+5V
2AF4 100n
2AF3 100u
23 XVDD
8 AVDD
2 VDD
18 PI4
24 PI8
28 PI12
29 PI13
30 SID_PI14
31 SII_PI15
32 SIC_PI16
33 PI17
34 PI18
35 PI19
41 _RTW
42 _RTR
43 _EOD
44 SYNC
17 SPDIFOUT
25 SOC
26 SOI
27 SOD
14 SOD1
15 SOD2
16 SOD3
13 CLKO
12 NC2
11 NC1
22 XVSS
7 AVSS
1 VSS
SID 21
SII 20
SIC 19
_PCS 36
PR 37
SPREF 39 3V1
SPDI_1 38
SPDI_2 40
XTI 9
XTO 10
TE 6
_POR 5 4V9
SCL 4
SDA 3
A2
A3
A4
A5
A6
A7
A8
I2S-MSP-OUT B6a,d
I2S-MSP-WS B6a,d
I2S-MSP-CLK B6a
2AE2 1n
IA71
2AE3 10n
2AE5 10n
IA72
3A74 75R
SPDIF-IN1 B14b
2AF0 10n
IA75
3A77 75R
SPDIF-BO-OUT B14b
SYS-CLK1 B6c
SYS-RESET B6a,C
SCL-F-AUD B6a(2x),C
SDA-F-AUD B6a(2x),C
B6c I2S-DD-CLK
B6c I2S-DD-WS
B6c I2S-DD-OUT
1 2 3 4 5 6 7 8 9
A B C D E F
8204 000 8329.4
E_14620_096.eps
070704

2AC1	B4
2AD0	B6
2AD1	B6
2AD3	B4
2AD4	B6
2AD5	B5
2AD6	B6
2AE2	D8
2AE3	D7
2AE5	D7
2AF0	E6
2AF3	C8
2AF4	C7
3A74	D7
3A77	E7
5A38	B8
7A30	B4
IA71	D7
IA72	D7
IA75	D7

SSB: Dolby Pro Logic Processor


B6C DOLBY PRO LOGIC PROCESSOR **B6C**

7A63
DPL4519G
I2C_CL
I2C_DA
SCL-F-AUD
SDA-F-AUD
B6a(2x),b
VREFTOP
0V2
IAA5
2AK6
100n
2AK7
10u
ANA_IN-
ANA_IN2+
ANA_IN1+
DEMODULATOR
NICAM DECODER
IDENT
DSP
FM1
FM2
NICAM A
NICAM B
I2S INTERFACE
I2SL/R
ADR-WS
ADR-DA
ADR-CL
ADR_SEL
I2S-WS
I2S-CL
I2S-WS3
I2S-CL3
I2S-DA-OUT1
I2S-DA-IN1
I2S-DA-IN2/3
I2S-DPL-WS
I2S-DPL-CLK
I2S-DD-WS
I2S-DD-CLK
I2S-DPL-OUT
I2S-DD-OUT
A9
A10
A11
A12
A13
A14
A15
A16
+5DB
+8VC
+5DA
AHVSUP
CAPL-A
CAPL-M
STANDBYQ
DVSUP
RESETQ
DACM-SUB
AGNDC
DACM_R
DACM_L
DACA-R
DACA-L
SC2-OUT-R
SC2-OUT-L
SC1_OUT_R
SC1_OUT_L
LOUDSPEAKER R
LOUDSPEAKER L
LOUDSPEAKER
HEADPHONE R
HEADPHONE L
HEADPHONE
D/A
A/D
SCART-L
SCART-R
MONO_IN
SCART 4
SC4-IN-R
SC4-IN-L
SCART 3
SC3-IN-R
SC3-IN-L
SCART 2
SC2_IN_R
SC2_IN_L
SCART 1
SC1_IN_R
SC1_IN_L
SCART Switching Facilities
VREF2
VREF1
AHVSS
ASG2
ASG1
ASG0
AVSS
TP1
DVSS
TESTEN
AUD-CL-OUT
NC1
NC2
D-CTR-IO1
D-CTR-IO0
NC3
AVSUP
XTAL_IN
AUDIO PLL
XTAL_OUT
NC4
NC5
NC6
SYS-CLK1
SYS-CLK0
SYS-RESET
MSP-SURR
REF-AUD
AUDIO-SW
SUBW
+11V_AUD
7A61-A
7A61-B
7A62-A
7A62-B
LM833D
SURR-R
AUDIO-R
REF-AUD
AUDIO-L
SURR-L
AUDIO-C
MSP-CENTER
B14b,e
B6a,B21
B6a(4x),C(2x)
B21
B6a
B6b
B14b
6V5
3V8
IAB0
9A19
9A20
9A60
9A61
9A65

8204 000 8329.4

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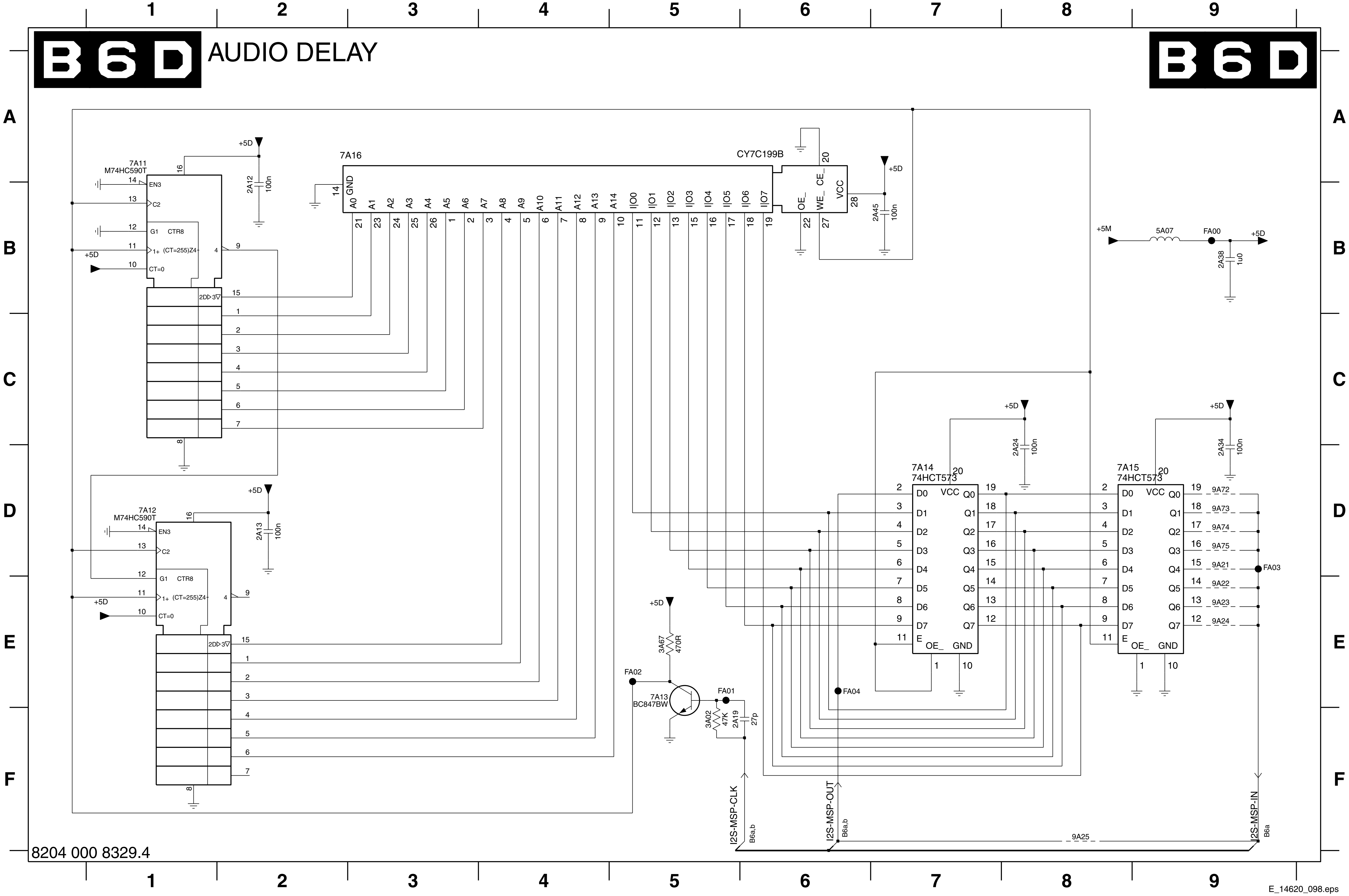
2AK0	G5
2AK1	G5
2AK2	B7
2AK3	B7
2AK4	B6
2AK5	B6
2AK6	D2
2AK7	D2
2AK8	B6
2AK9	B6
2AL0	B12
2AL1	B9
2AL2	B11
2AL3	B9
2AL4	B11
2AL8	C12
2AL9	C12
2ALA	F11
2AM0	C10
2AM1	E13
2AM2	E11
2AM3	E7
2AM5	D9
2AM6	F12
2AM7	D8
2AM9	E12
2AN0	E9
2AN1	E10
2AN5	D7
2AN6	D8
2AN7	G5
3AA0	B9
3AA1	D9
3AA4	C10
3AA5	C12
3AA6	B9
3AA7	C12
3AA9	C11
3AB0	E11
3AB2	D9
3AB3	F12
3AB4	D9
3AB5	F12
3AB6	E10
3AB7	F11
3AB8	E10
3AB9	E9
3AC0	B12
3AC1	B11
7A61-A	B12
7A61-B	B10
7A62-A	E12
7A62-B	D10
7A63	C3
9A19	C13
9A20	D13
9A60	B8
9A61	F12
9A65	B10
IA50	D9
IA51	B11
IA52	B9
IA53	E12
IAA1	E12
IAA2	B8
IAA3	E9
IAA4	C9
IAA5	D2
IAA6	C11
IAA7	F11
IAA8	C6
IAA9	C7
IAB0	D7
IAB1	C9
IAB2	C12

SSB: Audio Delay


B6D
AUDIO DELAY
B6D
1 2 3 4 5 6 7 8 9
A B C D E F
7A11
M74HC590T
EN3
C2
G1 CTR8
1+ (CT=255)Z4
CT=0
2D▷3∇
+5D
2A12 100n
7A12
M74HC590T
2A13 100n
7A16
CY7C199B
GND
A0 A1 A2 A3 A4 A5 A6 A7 A8 A9 A10 A11 A12 A13 A14
IO0 IO1 IO2 IO3 IO4 IO5 IO6 IO7
OE_ WE_ CE_ VCC
2A45 100n
+5M
5A07
FA00
2A38 1u0
7A14
74HCT573
7A15
74HCT573
D0 D1 D2 D3 D4 D5 D6 D7 E
Q0 Q1 Q2 Q3 Q4 Q5 Q6 Q7
VCC OE_ GND
2A24 100n
2A34 100n
9A72 9A73 9A74 9A75 9A21 9A22 9A23 9A24
FA03
FA04
3A67 470R
FA02
7A13
BC847BW
FA01
3A02 47K
2A19 27p
I2S-MSP-CLK B6a,b
I2S-MSP-OUT B6a,b
I2S-MSP-IN B6a
9A25
8204 000 8329.4

2A12	B2
2A13	D2
2A19	F5
2A24	D8
2A34	D9
2A38	B9
2A45	B7
3A02	F5
3A67	E5
5A07	B9
7A11	A1
7A12	D1
7A13	E5
7A14	D7
7A15	D8
7A16	A3
9A21	D9
9A22	E9
9A23	E9
9A24	E9
9A25	F8
9A72	D9
9A73	D9
9A74	D9
9A75	D9
FA00	B9
FA01	E5
FA02	E5
FA03	D9
FA04	E6

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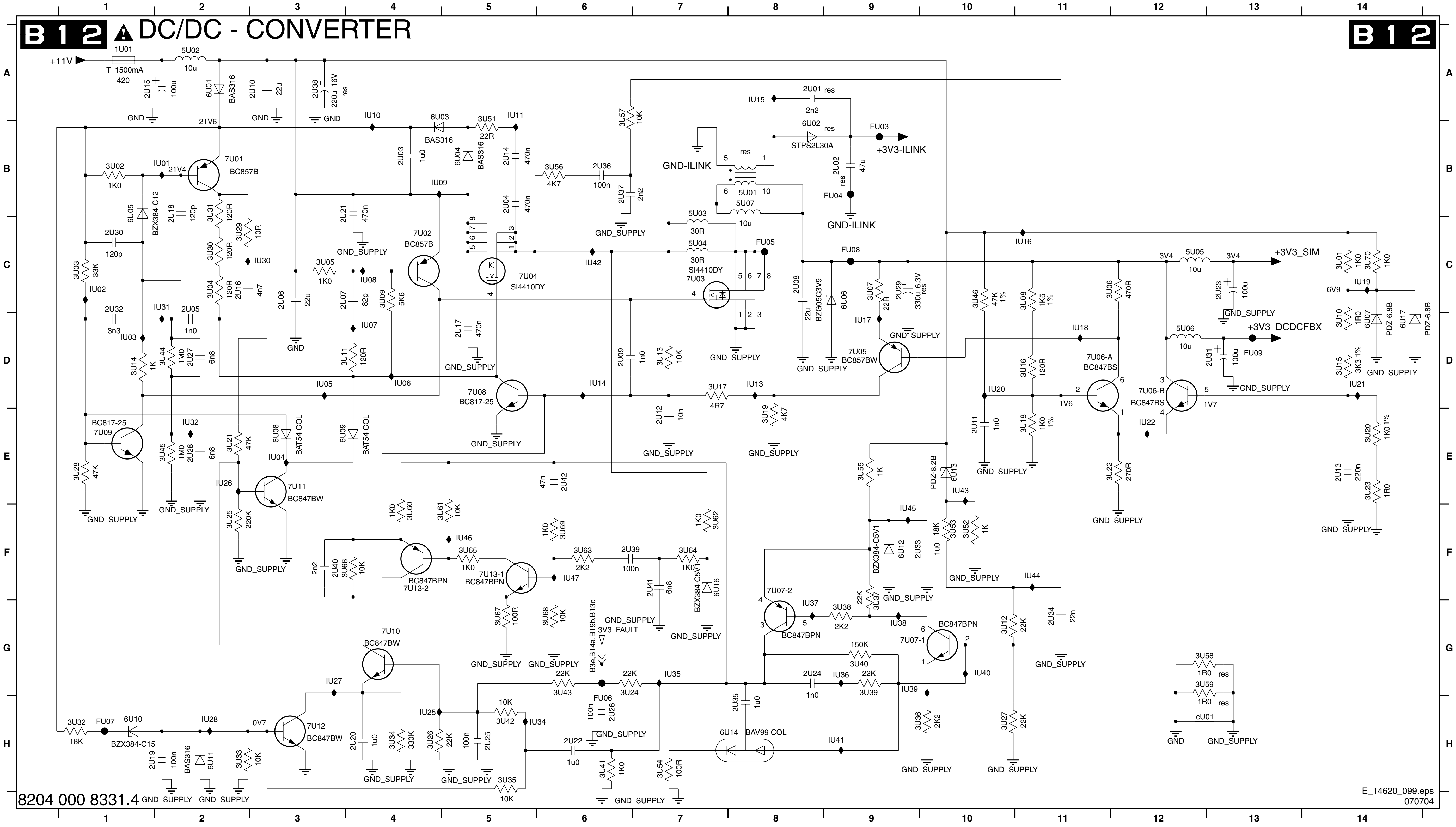
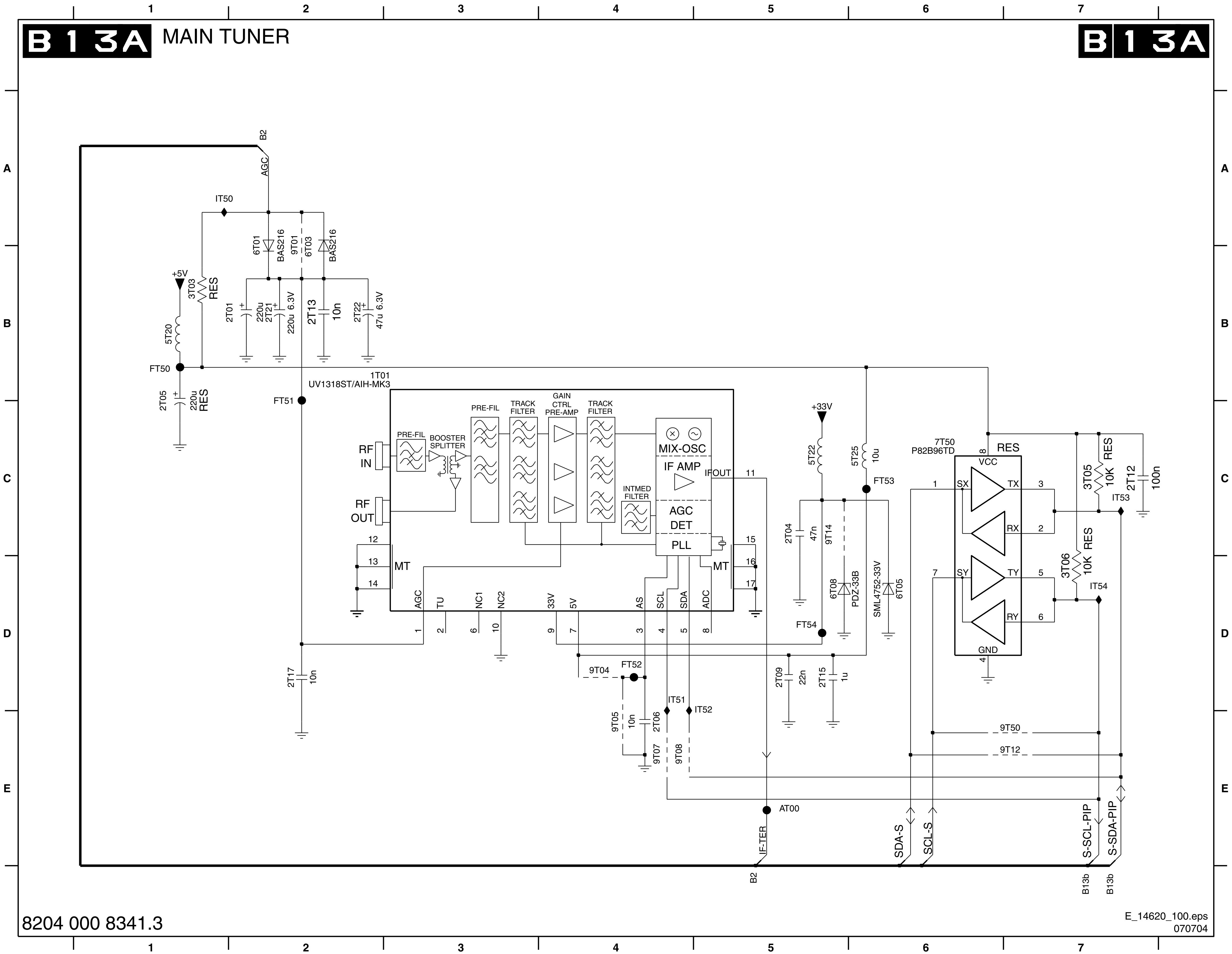
SSB: DC/DC Converter

1U01 A1
2U01 A8
2U02 B9
2U03 B4
2U04 B5
2U05 C2
2U06 C3
2U07 C4
2U08 C8
2U09 D6
2U10 A3
2U11 E10
2U12 E7
2U13 E14
2U14 B5
2U15 A1
2U16 C2
2U17 D5
2U18 B2
2U19 H2
2U20 H4
2U21 B4
2U22 H6
2U23 C13
2U24 G8
2U25 H5
2U26 H6
2U27 D2
2U28 E2
2U29 C9
2U30 C1
2U31 D13
2U32 C1
2U33 F10
2U34 G11
2U35 H8
2U36 B6
2U37 B6
2U38 A3
2U39 F6
2U40 F3
2U41 F7
2U42 E6
3U01 C14
3U02 B1
3U03 C1
3U04 C2
3U05 C3
3U06 C12
3U07 C9
3U08 C11
3U09 C4
3U10 D14
3U11 D4
3U12 G10
3U13 D7
3U14 D1
3U15 D14
3U16 D11
3U17 D7
3U18 E11
3U19 E8
3U20 E14
3U21 E2
3U22 E12
3U23 E14
3U24 G6
3U25 F2
3U26 H4
3U27 H10
3U28 E1
3U29 C2
3U30 C2
3U31 B2
3U32 H1
3U33 H2
3U34 H4
3U35 H5
3U36 H10
3U37 G9
3U38 G9
3U39 G9
3U40 G9
3U41 H6
3U42 H5
3U43 G6
3U44 D2
3U45 E2
3U46 C10
3U51 B5
3U52 F10
3U53 F10
3U54 H7
3U55 E9
3U56 B6
3U57 A6
3U58 G12
3U59 G12
3U60 F4
3U61 F5
3U62 F7
3U63 F6
3U64 F7
3U65 F5
3U66 F4
3U67 G5
3U68 G6
3U69 F6
3U70 C14
5U01 B8
5U02 A2
5U03 B7
5U04 C7
5U05 C12
5U06 D12
5U07 B8
6U01 A2
6U02 A8
6U03 A4
6U04 B5
6U05 B1
6U06 C9
6U07 D14
6U08 E3
6U09 E3
6U10 H1
6U11 H2
6U12 F9
6U13 E10
6U14 H8
6U16 F7
6U17 D14
7U01 B2
7U02 C4
7U03 C7
7U04 C5
7U05 D9
7U06-A D12
7U06-B D12
7U07-1 G10
7U07-2 F8
7U08 D5
7U09 E1
7U10 G4
7U11 E3
7U12 H3
7U13-1 F5
7U13-2 F4
FU03 B9
FU04 B9
FU05 C8
FU06 H6
FU07 H1
FU08 C9
FU09 D13
IU01 B2
IU02 C1
IU03 D1
IU04 E3
IU05 D3
IU06 D4
IU07 D4
IU08 C4
IU09 B4
IU10 A4
IU11 A5
IU13 D8
IU14 D6
IU15 A8
IU16 C11
IU17 D9
IU18 D11
IU19 C14
IU20 D10
IU21 D14
IU22 E12
IU25 H4
IU26 E2
IU27 G3
IU28 H2
IU30 C3
IU31 C2
IU32 E2
IU34 H6
IU35 G7
IU36 G9
IU37 G8
IU38 G9
IU39 G9
IU40 G10
IU41 H9
IU42 C6
IU43 E10
IU44 F11
IU45 F9
IU46 F5
IU47 F6
cU01 H12


B12 DC/DC - CONVERTER
+11V
1U01 T 1500mA 420
5U02 10u
2U15 100u
6U01 BAS316
2U10 22u
2U38 220u 16V res
GND
21V6
IU10
6U03 BAS316
3U51 22R
IU11
3U57 10K
2U01 res 2n2
IU15
6U02 res STPS2L30A
FU03
+3V3-ILINK
GND-ILINK
5U01
2U02 res 47u
FU04
5U07 10u
5U03 30R
5U04 30R
SI4410DY 7U03
FU05
FU08
7U01 BC857B
IU01 21V4
3U02 1K0
7U02 BC857B
7U04 SI4410DY
IU42
IU16
+3V3_SIM
5U05 10u
3V4
+3V3_DCDCFBX
5U06 10u
FU09
7U05 BC857BW
7U06-A BC847BS
7U06-B BC847BS
7U08 BC817-25
IU14
IU13
3U17 4R7
7U09 BC817-25
7U11 BC847BW
7U13-2 BC847BPN
7U13-1 BC847BPN
7U07-2 BC847BPN
7U07-1 BC847BPN
7U10 BC847BW
7U12 BC847BW
6U08 BAT54 COL
6U09 BAT54 COL
6U10 BZX384-C15
6U11 BAS316
6U14 BAV99 COL
6U12 BZX384-C5V1
6U16 BZX384-C5V1
6U13 PDZ-8.2B
6U07 PDZ-6.8B
6U17 PDZ-6.8B
6U05 BZX384-C12
6U06 BZG05C3V9
B3e,B14a,B19b,B13c 3V3_FAULT
GND_SUPPLY
3U58 1R0 res
3U59 1R0 res
cU01
1V6
1V7
6V9
0V7
1 2 3 4 5 6 7 8 9 10 11 12 13 14
A B C D E F G H
8204 000 8331.4
E_14620_099.eps
070704

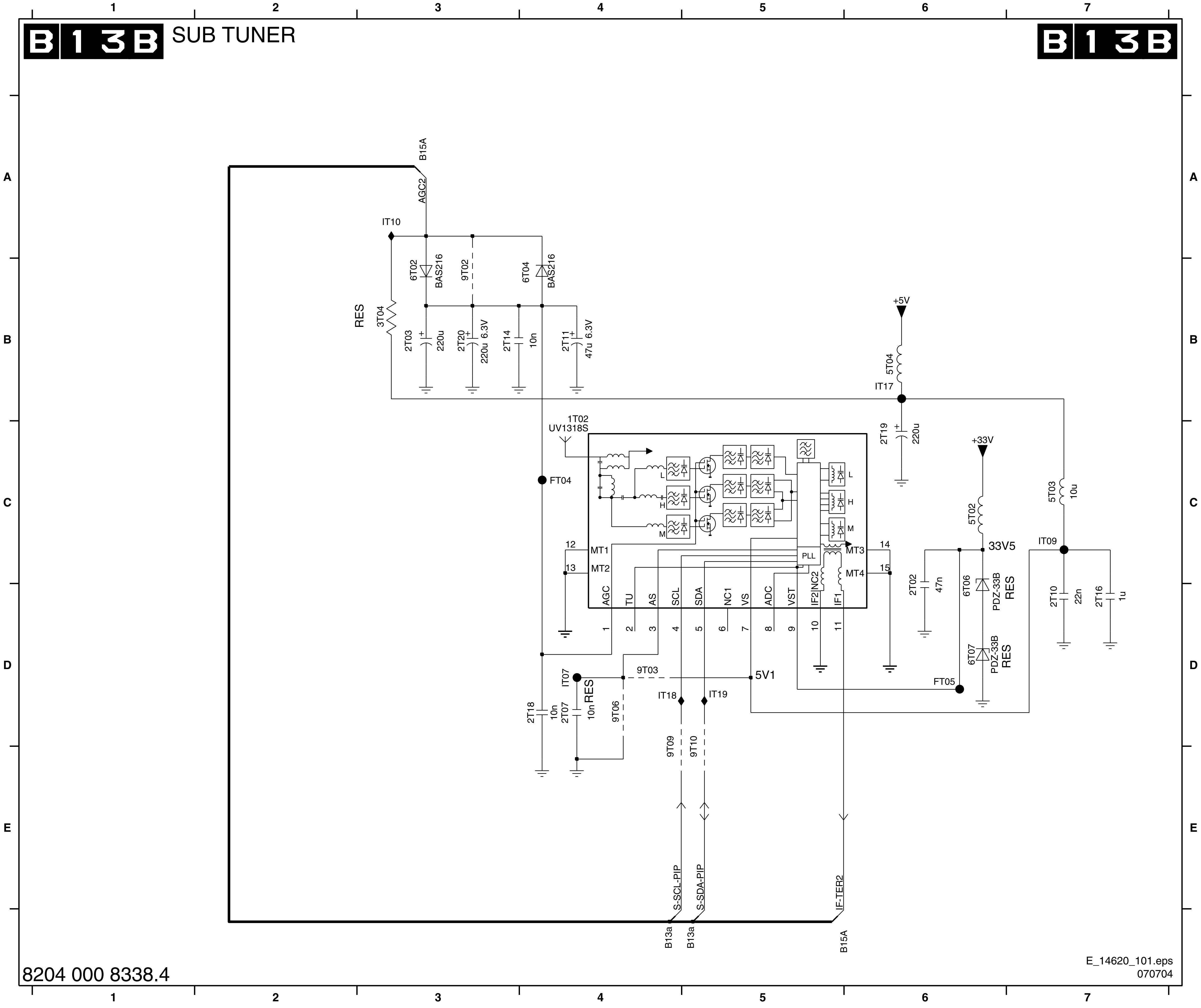
SSB: Main Tuner

1T01 B3
2T01 B2
2T04 C5
2T05 B1
2T06 E4
2T09 D5
2T12 C7
2T13 B2
2T15 D5
2T17 D2
2T21 B2
2T22 B2
3T03 B1
3T05 C7
3T06 D7
5T20 B1
5T22 C5
5T25 C6
6T01 A2
6T03 B2
6T05 D6
6T08 D5
7T50 C6
9T01 A2
9T04 D4
9T05 E4
9T07 E4
9T08 E4
9T12 E7
9T14 C5
9T50 E7
AT00 E5
FT50 B1
FT51 C2
FT52 D4
FT53 C6
FT54 D5
IT50 A1
IT51 D4
IT52 D5
IT53 C7
IT54 D7



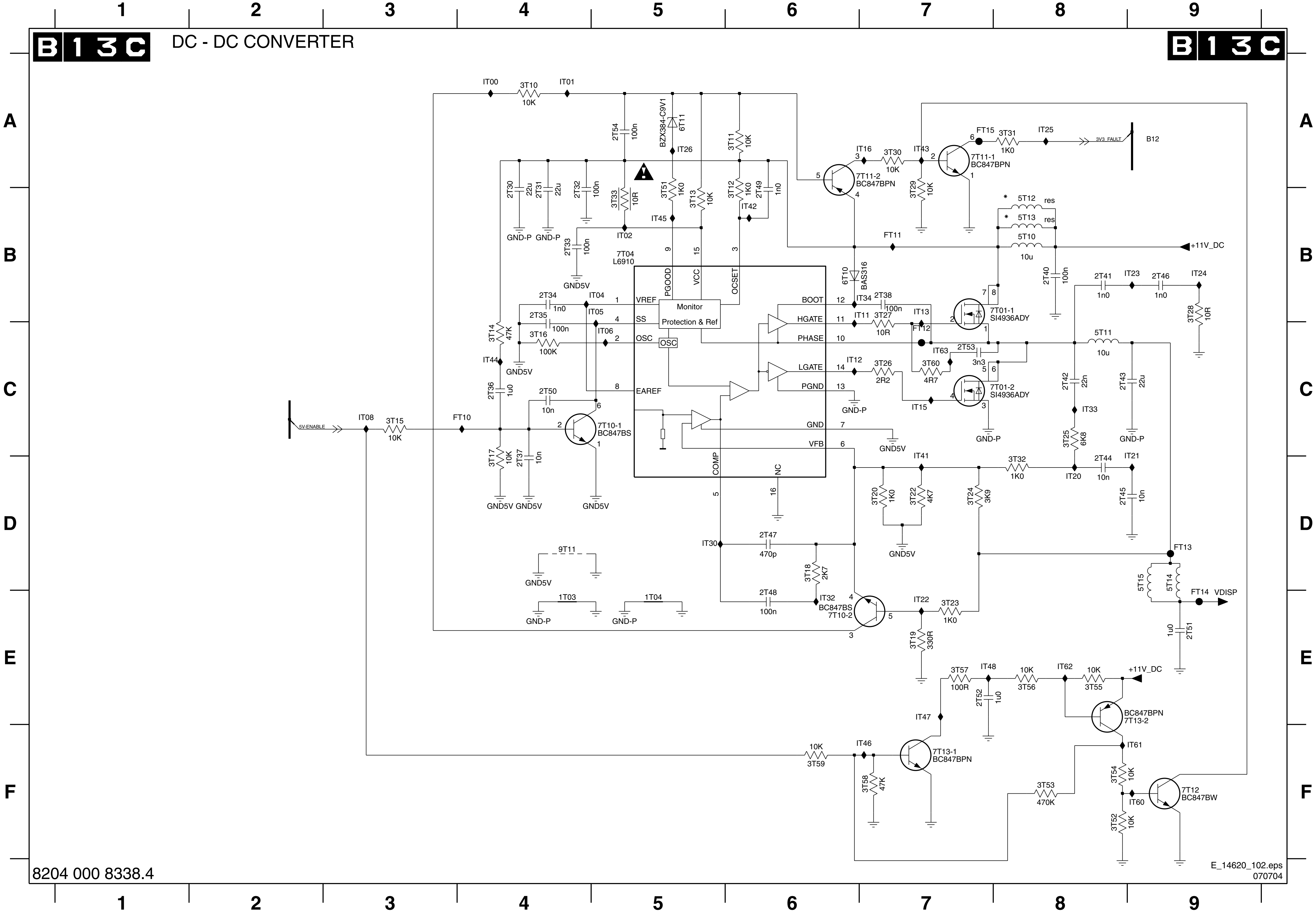
1
2
3
4
5
6
7
A
B
C
D
E
B13A
MAIN TUNER
B13A
B2
AGC
IT50
6T01
BAS216
9T01
6T03
BAS216
+5V
3T03
RES
2T01
220u
2T21
220u 6.3V
2T13
10n
2T22
47u 6.3V
5T20
FT50
2T05
220u
RES
1T01
UV1318ST/AIH-MK3
FT51
RF IN
RF OUT
PRE-FIL
BOOSTER SPLITTER
PRE-FIL
TRACK FILTER
GAIN CTRL PRE-AMP
TRACK FILTER
INTMED FILTER
MIX-OSC
IF AMP
AGC DET
PLL
IFOUT
11
12
13
14
15
16
17
MT
MT
AGC
TU
NC1
NC2
33V
5V
AS
SCL
SDA
ADC
1
2
6
10
9
7
3
4
5
8
2T17
10n
9T04
FT52
9T05
10n
2T06
9T07
IT51
IT52
9T08
+33V
5T22
5T25
10u
FT53
2T04
47n
9T14
6T08
PDZ-33B
SML4752-33V
6T05
FT54
2T09
22n
2T15
1u
AT00
IF-TER
B2
7T50
P82B96TD
8
VCC
RES
1
SX
TX
3
RX
2
7
SY
TY
5
RY
6
GND
4
3T05
10K
RES
2T12
100n
IT53
3T06
10K
RES
IT54
9T50
9T12
SDA-S
SCL-S
S-SCL-PIP
S-SDA-PIP
B13b
B13b
8204 000 8341.3
E_14620_100.eps
070704

SSB: Sub Tuner


B13B
SUB TUNER
B13B
1
2
3
4
5
6
7
A
B
C
D
E
B15A
AGC2
IT10
6T02
BAS216
9T02
6T04
BAS216
RES
3T04
2T03
220u
2T20
220u 6.3V
2T14
10n
2T11
47u 6.3V
+5V
5T04
IT17
2T19
220u
1T02
UV1318S
FT04
L
H
M
PLL
12
MT1
13
MT2
MT3
14
MT4
15
AGC
TU
AS
SCL
SDA
NC1
VS
ADC
VST
IF2
NC2
IF1
1
2
3
4
5
6
7
8
9
10
11
+33V
5T02
33V5
2T02
47n
6T06
PDZ-33B
RES
6T07
PDZ-33B
RES
FT05
5T03
10u
IT09
2T10
22n
2T16
1u
IT07
9T03
5V1
RES
2T18
10n
2T07
10n
9T06
IT18
IT19
9T09
9T10
S-SCL-PIP
S-SDA-PIP
IF-TER2
B13a
B13a
B15A
8204 000 8338.4
E_14620_101.eps
070704

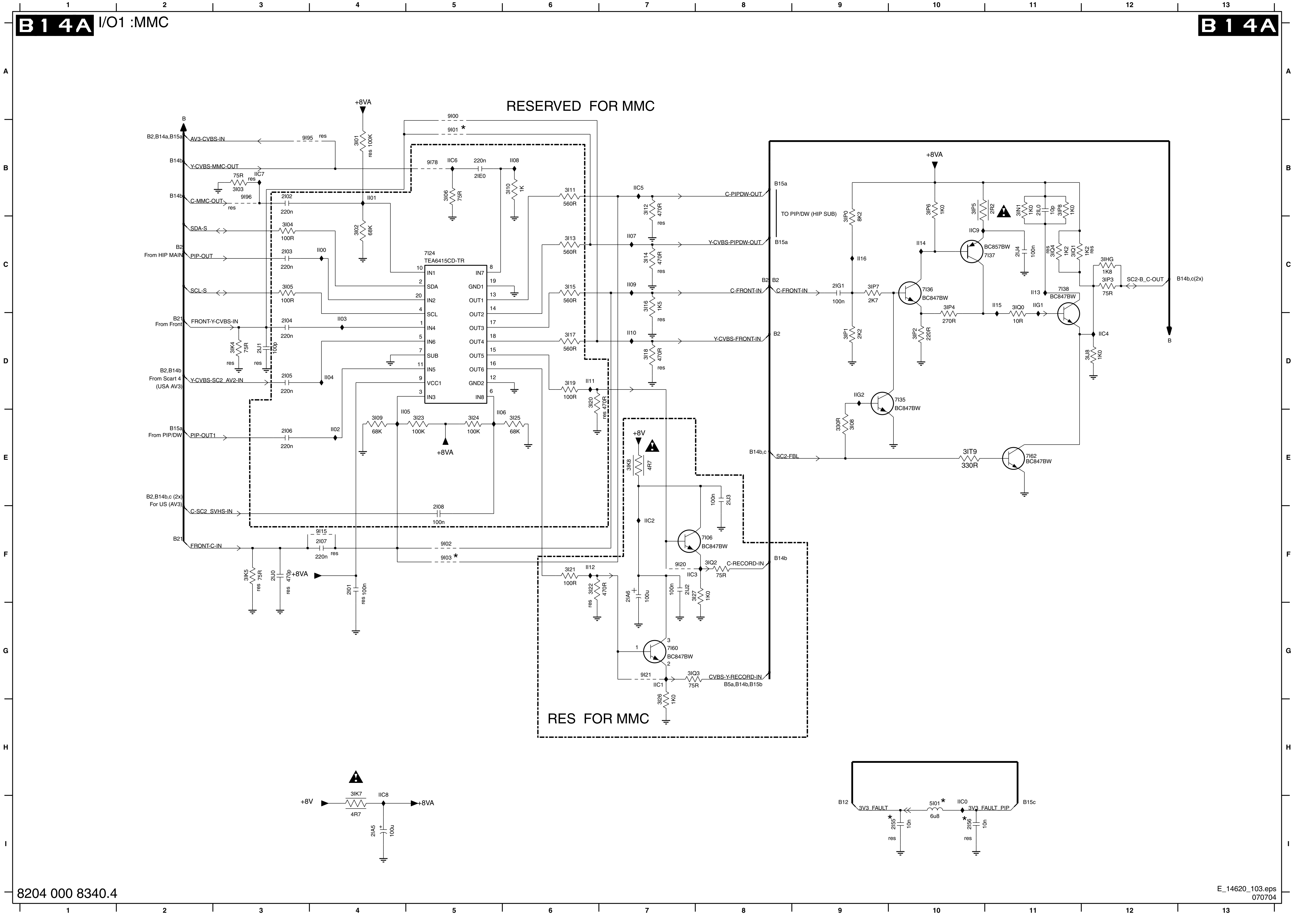
1T02	C4
2T02	D6
2T03	B3
2T07	D4
2T10	D7
2T11	B4
2T14	B3
2T16	D7
2T18	D4
2T19	C6
2T20	B3
3T04	B3
5T02	C6
5T03	C7
5T04	B6
6T02	B3
6T04	B4
6T06	D6
6T07	D6
9T02	B3
9T03	D4
9T06	D4
9T09	E4
9T10	E5
FT04	C4
FT05	D6
IT07	D4
IT09	C7
IT10	A3
IT17	B6
IT18	D4
IT19	D5

SSB: DC/DC Converter


B13C
DC - DC CONVERTER
1
2
3
4
5
6
7
8
9
A
B
C
D
E
F
IT00
3T10
10K
IT01
2T54
100n
BZX384-C9V1
6T11
IT26
3T11
10K
2T30
22u
2T31
22u
2T32
100n
3T33
10R
3T51
1K0
3T13
10K
3T12
1K0
2T49
1n0
IT45
IT42
IT02
GND-P
GND-P
2T33
100n
GND5V
7T04
L6910
PGOOD
VCC
OCSET
Monitor
Protection & Ref
VREF
SS
OSC
EAREF
BOOT
HGATE
PHASE
LGATE
PGND
GND
VFB
COMP
NC
2T34
1n0
IT04
2T35
100n
IT05
3T16
100K
IT06
3T14
47K
IT44
GND5V
2T36
1u0
2T50
10n
7T10-1
BC847BS
5V-ENABLE
IT08
3T15
10K
FT10
3T17
10K
2T37
10n
GND5V
GND5V
GND5V
IT16
3T30
10K
IT43
7T11-2
BC847BPN
7T11-1
BC847BPN
3T29
10K
FT15
3T31
1K0
IT25
3V3_FAULT
B12
5T12
res
5T13
res
5T10
10u
FT11
+11V_DC
6T10
BAS316
IT34
2T38
100n
IT11
3T27
10R
IT13
FT12
7T01-1
SI4936ADY
2T40
100n
2T41
1n0
IT23
2T46
1n0
IT24
3T28
10R
IT63
2T53
3n3
3T60
4R7
5T11
10u
IT12
3T26
2R2
IT15
7T01-2
SI4936ADY
GND-P
GND-P
2T42
22n
2T43
22u
IT33
3T25
6K8
GND-P
GND5V
IT41
3T32
1K0
IT20
2T44
10n
IT21
3T20
1K0
3T22
4K7
3T24
3K9
2T45
10n
GND5V
FT13
IT30
2T47
470p
3T18
2K7
2T48
100n
IT32
BC847BS
7T10-2
IT22
3T23
1K0
3T19
330R
5T15
5T14
FT14
VDISP
1u0
2T51
9T11
GND5V
1T03
GND-P
1T04
GND-P
3T57
100R
IT48
10K
3T56
IT62
10K
3T55
+11V_DC
2T52
1u0
BC847BPN
7T13-2
IT47
IT61
10K
3T59
IT46
7T13-1
BC847BPN
3T58
47K
3T53
470K
3T54
10K
IT60
7T12
BC847BW
3T52
10K
8204 000 8338.4
E_14620_102.eps
070704

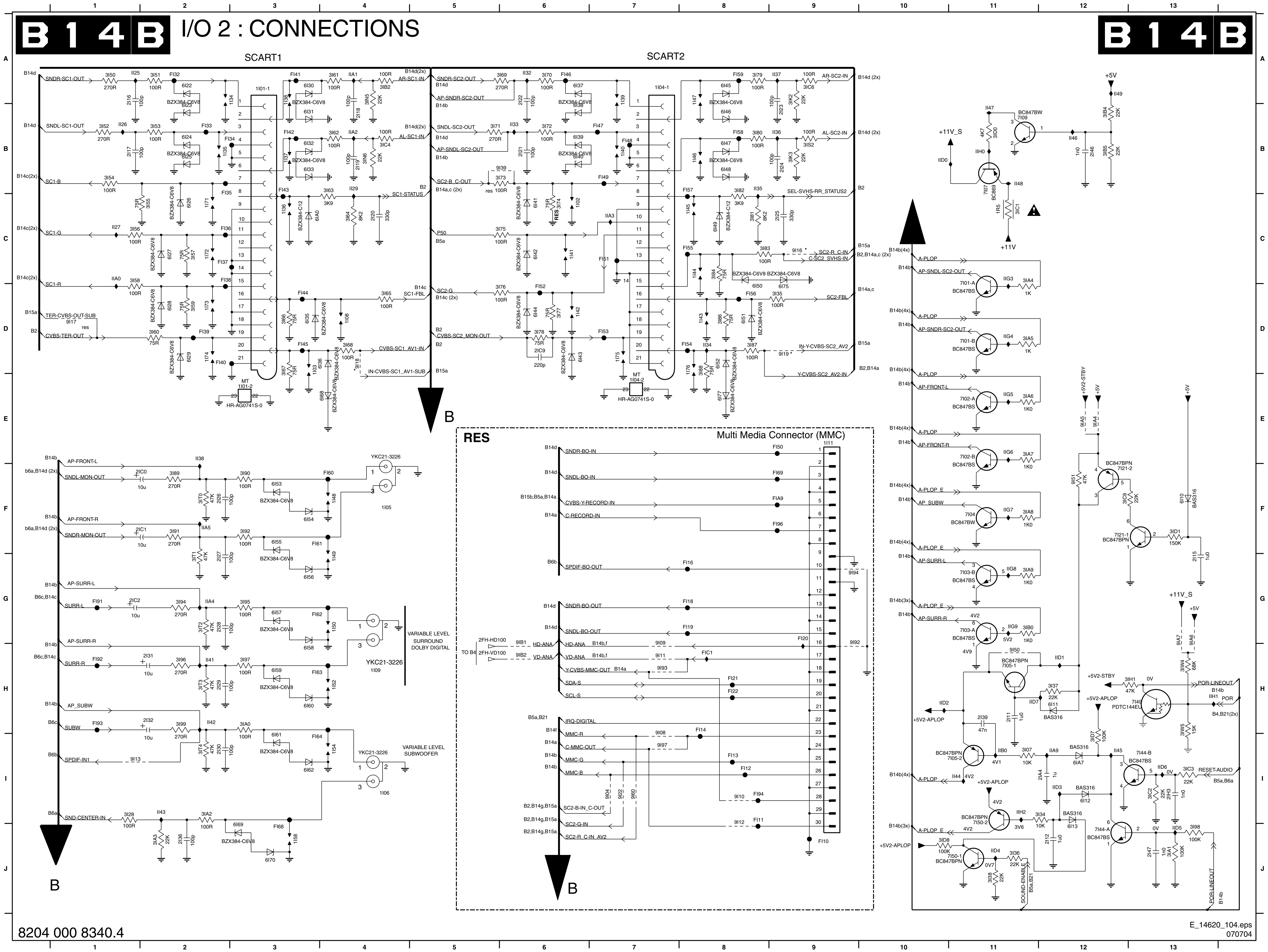
1T03 E4
1T04 E5
2T30 B4
2T31 B4
2T32 B4
2T33 B4
2T34 B4
2T35 B4
2T36 C4
2T37 D4
2T38 B7
2T40 B8
2T41 B8
2T42 C8
2T43 C8
2T44 D8
2T45 D8
2T46 B9
2T47 D6
2T48 E6
2T49 B6
2T50 C4
2T51 E9
2T52 E7
2T53 C7
2T54 A5
3T10 A4
3T11 A6
3T12 B6
3T13 B5
3T14 C4
3T15 C3
3T16 C4
3T17 D4
3T18 D6
3T19 E7
3T20 D7
3T22 D7
3T23 E7
3T24 D7
3T25 C8
3T26 C7
3T27 B7
3T28 B9
3T29 B7
3T30 A7
3T31 A8
3T32 D8
3T33 B5
3T51 B5
3T52 F8
3T53 F8
3T54 F8
3T55 E8
3T56 E8
3T57 E7
3T58 F7
3T59 F6
3T60 C7
5T10 B8
5T11 C8
5T12 B8
5T13 B8
5T14 D9
5T15 D9
6T10 B6
6T11 A5
7T01-1 B7
7T01-2 C7
7T04 B5
7T10-1 C5
7T10-2 E6
7T11-1 A7
7T11-2 A6
7T12 F9
7T13-1 F7
7T13-2 E8
9T11 D4
FT10 C4
FT11 B7
FT12 C7
FT13 D9
FT14 E9
FT15 A7
IT00 A4
IT01 A4
IT02 B5
IT04 B5
IT05 B5
IT06 C5
IT08 C3
IT11 B7
IT12 C6
IT13 B7
IT15 C7
IT16 A7
IT20 D8
IT21 C9
IT22 E7
IT23 B9
IT24 B9
IT25 A8
IT26 A5
IT30 D5
IT32 E6
IT33 C8
IT34 B7
IT41 C7
IT42 B6
IT43 A7
IT44 C4
IT45 B5
IT46 F7
IT47 E7
IT48 E7
IT60 F9
IT61 F9
IT62 E8
IT63 C7

SSB: I/O1: MMC


B14A
I/O1 :MMC
RESERVED FOR MMC
RES FOR MMC
+8VA
9I00
9I01 *
B2,B14a,B15a
AV3-CVBS-IN
9I95 res
3I01 res 100K
B14b
Y-CVBS-MMC-OUT
9I78
IIC6
220n
2IE0
II08
75R res
IIC7
3I03
B14b
C-MMC-OUT
9I96 res
2I02 220n
II01
3I06 75R
3I10 1K
3I11 560R
IIC5
3I12 470R res
C-PIPDW-OUT
B15a
SDA-S
3I04 100R
3I02 68K
II07
3I13 560R
3I14 470R res
Y-CVBS-PIPDW-OUT
B15a
B2 From HIP MAIN
PIP-OUT
2I03 220n
II00
7I24
TEA6415CD-TR
IN1
SDA
IN2
SCL
IN4
IN6
SUB
IN5
VCC1
IN3
IN7
GND1
OUT1
OUT2
OUT3
OUT4
OUT5
OUT6
GND2
IN8
SCL-S
3I05 100R
II09
3I15 560R
3I16 1K5 res
C-FRONT-IN
B2
B21 From Front
FRONT-Y-CVBS-IN
2I04 220n
II03
3IK4 75R res
2IJ1 100p res
II10
3I17 560R
3I18 470R res
Y-CVBS-FRONT-IN
B2
B2,B14b From Scart 4 (USA AV3)
Y-CVBS-SC2_AV2-IN
2I05 220n
II04
3I19 100R
II11
3I20 res 470R
B15a From PIP/DW
PIP-OUT1
2I06 220n
II02
3I09 68K
II05
3I23 100K
3I24 100K
II06
3I25 68K
+8VA
B2,B14b,c (2x) For US (AV3)
C-SC2_SVHS-IN
2I08 100n
B21
FRONT-C-IN
9I15
2I07 220n res
9I02
9I03 *
3IK5 75R res
2IJ0 470p res
+8VA
2I01 res 100n
+8V
3IK8 4R7
IIC2
2IJ3 100n
7I06 BC847BW
9I20
3IQ2 75R
C-RECORD-IN
B14b
IIC3
3I21 100R
II12
3I22 res 470R
2IA6 100u
2IJ2 100n
3I27 1K0
7I60 BC847BW
9I21
3IQ3 75R
CVBS-Y-RECORD-IN
B5a,B14b,B15b
IIC1
3I26 1K0
TO PIP/DW (HIP SUB)
3IP0 8K2
II16
+8VA
3IP6 1K0
3IP5 2R2
3IN1 1K0
2IL0 10p
3IP8 1K0
IIC9
II14
BC857BW 7I37
2IJ4 100n
3IQ4 res
3IQ1 1K2
1K2 res
3IHG 1K8
3IP3 75R
SC2-B_C-OUT
B14b,c(2x)
B
2IG1 100n
3IP7 2K7
7I36 BC847BW
3IP4 270R
II15
3IQ0 10R
IIG1
II13
7I38 BC847BW
IIC4
3IU8 1K0
3IP1 2K2
3IP2 220R
IIG2
7I35 BC847BW
330R 3I08
B14b,c
SC2-FBL
3IT9 330R
7I62 BC847BW
+8V
3IK7 4R7
IIC8
+8VA
2IA5 100u
B12
3V3_FAULT
2I55 * res 10n
5I01 * 6u8
IIC0
3V3_FAULT_PIP
2I56 * res 10n
B15c
8204 000 8340.4
E_14620_103.eps
070704
1
2
3
4
5
6
7
8
9
10
11
12
13
A
B
C
D
E
F
G
H
I

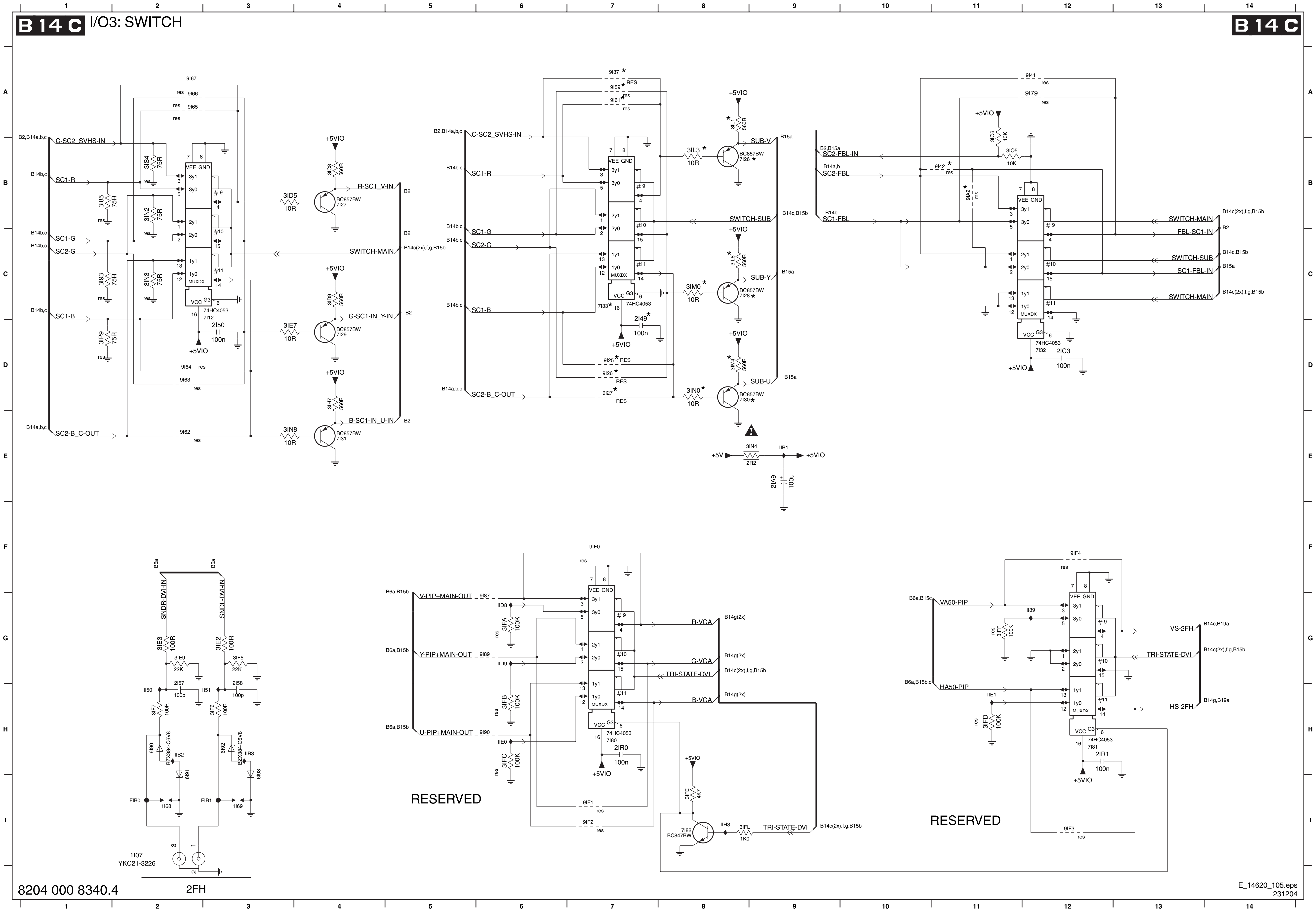
2I01	F4
2I02	B3
2I03	C3
2I04	D3
2I05	D3
2I06	E3
2I07	F4
2I08	F5
2I55	I10
2I56	I10
2IA5	I4
2IA6	F7
2IE0	B5
2IG1	C9
2IJ0	F3
2IJ1	D3
2IJ2	F7
2IJ3	E8
2IJ4	C11
2IL0	B11
3I01	B4
3I02	C4
3I03	B3
3I04	C3
3I05	C3
3I06	B5
3I08	E9
3I09	E4
3I10	B6
3I11	B6
3I12	B7
3I13	C6
3I14	C7
3I15	C6
3I16	C7
3I17	D6
3I18	D7
3I19	D6
3I20	D6
3I21	F6
3I22	F6
3I23	E5
3I24	E5
3I25	E6
3I26	H7
3I27	F8
3IHG	C12
3IJ8	D12
3IK4	D3
3IK5	F3
3IK7	I4
3IK8	E7
3IN1	B11
3IP0	C9
3IP1	D9
3IP2	D10
3IP3	C12
3IP4	C10
3IP5	B10
3IP6	B10
3IP7	C9
3IP8	B11
3IQ0	C11
3IQ1	C11
3IQ2	F8
3IQ3	G7
3IQ4	C11
3IT9	E10
5I01	I10
7I06	F8
7I24	C5
7I35	D10
7I36	C10
7I37	C10
7I38	C11
7I60	G7
7I62	E11
9I00	A5
9I01	B5
9I02	F5
9I03	F5
9I15	F4
9I20	F7
9I21	G7
9I78	B5
9I95	B3
9I96	B3
II00	C4
II01	B4
II02	E4
II03	D4
II04	D4
II05	E4
II06	E5
II07	C7
II08	B6
II09	C7
II10	D7
II11	D6
II12	F6
II14	C10
II15	C11
II16	C9
IIC0	I10
IIC1	G7
IIC2	F7
IIC3	F7
IIC4	D12
IIC5	B7
IIC6	B5
IIC7	B3
IIC8	H4
IIC9	C10
IIG1	C11
IIG2	D9

SSB: I/O2: Connections



1I01-1	A3
1I01-2	E3
1I02	C6
1I03	D3
1I04-1	A7
1I04-2	E7
1I05	F4
1I06	I4
1I08	D4
1I09	H4
1I11	E9
1I34	A2
1I35	B2
1I36	C3
1I37	B3
1I38	A3
1I39	A7
1I40	B7
1I41	C6
1I42	D6
1I43	D8
1I44	C8
1I45	C8
1I46	B8
1I47	A8
1I48	F4
1I49	G4
1I50	G4
1I52	H4
1I54	I4
1I58	J3
1I71	C2
1I72	C2
1I73	D2
1I74	D2
1I75	D7
1I76	D8
2I11	H11
2I12	J12
2I15	G13
2I16	A1
2I17	B1
2I18	B4
2I19	B4
2I20	C4
2I21	B6
2I22	A6
2I23	B9
2I24	B9
2I25	C9
2I26	F2
2I27	G2
2I28	G2
2I29	H2
2I30	I2
2I31	H2
2I32	H2
2I36	J2
2I39	H11
2I46	B12
2I47	J13
2IA4	I12
2IC0	F2
2IC1	F2
2IC2	G1
2IC9	D6
2IH3	I13
3I07	I11
3I28	I1
3I34	I12
3I35	D9
3I36	J11
3I37	H12
3I38	J11
3I50	A1
3I51	A2
3I52	B1
3I53	B2
3I54	B1
3I55	C2
3I56	C1
3I57	C2
3I58	C1
3I59	D2
3I60	D2
3I61	A4
3I62	B4
3I63	B4
3I64	C4
3I65	D4
3I66	D3
3I67	D3
3I68	D4
3I69	A6
3I70	A6
3I71	B5
3I72	B6
3I73	B6
3I74	C6
3I75	C6
3I76	D6
3I77	D6
3I78	D6
3I79	A8
3I80	B8
3I81	C8
3I82	B8
3I83	C8
3I84	C8
3I86	D8
3I87	D8
3I88	D8
3I89	F2
3I90	F3
3I91	F2
3I92	F3
3I94	G2
3I95	G3
3I96	H2
3I97	H3
3I98	J13
3I99	H2
3IA0	H3
3IA1	J13
3IA2	I2
3IA3	J2
3IA4	C11
3IA5	D11
3IA6	E11
3IA7	E11
3IA8	F11
3IA9	G11
3IB0	G11
3IB2	A4
3IB4	B12
3IB5	B12
3IC1	C11
3IC2	I13
3IC3	I13
3IC4	B4
3IC6	A9
3IC9	F12
3ID0	B11
3ID1	F13
3ID7	I12
3ID8	J10
3IH1	H13
3IK2	A9
3IK3	B9
3IN5	A4
3IN6	B4
3IS2	B9
3IT0	F2
3IT1	G2
3IT2	G2
3IT3	H2
3IT4	I2
3IW4	H13
3IW5	H13
6I10	F13
6I11	H12
6I12	I12
6I13	J12
6I22	A2
6I23	A2
6I24	B2
6I25	B2
6I26	C2
6I27	C2
6I28	D2
6I29	D2
6I30	A3
6I31	B3
6I32	B3
6I33	B3
6I35	D3
6I36	D4
6I37	A6
6I38	A6
6I39	B6
6I40	B6
6I41	C6
6I42	C6
6I43	D6
6I44	D6
6I45	A8
6I46	B8
6I47	B8
6I48	B8
6I49	C8
6I50	D8
6I51	D8
6I52	D8
6I53	F3
6I54	F3
6I55	F3
6I56	G3
6I57	G3
6I58	H3
6I59	H3
6I60	H3
6I61	I3
6I62	I3
6I68	E4
6I69	J3
6I70	J3
6I75	D9
6I77	E8
6IA0	C3
6IA7	I12
7I01-A	D11
7I01-B	D11
7I02-A	E11
7I02-B	E11
7I03-A	G11
7I03-B	G11
7I04	F11
7I05-1	H11
7I05-2	I11
7I07	B11
7I09	B11
7I21-1	F13
7I21-2	F13
7I44-A	J12
7I44-B	I13
7I49	H13
7I50-1	J11
7I50-2	I11
9I04	I7
9I08	I7
9I09	H7
9I10	I8
9I11	H7
9I12	J8
9I13	I1
9I16	C9
9I17	D1
9I18	D4
9I19	D9
9I22	I7
9I39	B6
9I50	H11
9I51	F12
9I60	I7
9I92	H9
9I93	H7
9I94	G9
9I97	I7
9IA4	E12
9IA5	E12
9IA6	G13
9IA7	G13
9IB1	H6
9IB2	H6
FI10	J9
FI11	I8
FI12	I8
FI13	I8
FI14	H8
FI16	G8
FI18	G8
FI19	G8
FI20	G9
FI21	H8
FI22	H8
FI32	A2
FI33	B2
FI34	B2
FI35	C2
FI36	C2
FI37	C2
FI38	C2
FI39	D2
FI40	D2
FI41	A3
FI42	B3
FI43	B3
FI44	D3
FI45	D3
FI46	A6
FI47	B7
FI48	B7
FI49	B7
FI50	E9
FI51	C7
FI52	D6
FI53	D7
FI54	D8
FI55	C8
FI56	D8
FI57	B8
FI58	B8
FI59	A8
FI60	F4
FI61	F3
FI62	G3
FI63	H3
FI64	I3
FI68	J3
FI69	F9
FI91	G1
FI92	H1
FI93	H1
FI94	I8
FI96	F9
FIA9	F9
FIC1	H8
II25	A1
II26	B1
II27	C1
II29	B4
II32	A6
II33	B6
II34	D8
II35	B8
II36	B9
II37	A9
II38	E2
II41	H2
II42	H2
II43	I2
II44	I11
II45	I12
II46	B12
II47	B11
II48	B11
II49	A12
IIA0	C1
IIA1	A4
IIA2	B4
IIA3	C7
IIA4	G2
IIA5	F2
IIA9	I12
IIB0	I11
IID0	B10
IID1	H12
IID2	H10
IID3	I12
IID4	J11
IID5	J13
IID6	I13
IID7	H11
IIG3	C11
IIG4	D11
IIG5	E11
IIG6	E11
IIG7	F11
IIG8	G11
IIG9	G11
IIH0	B11
IIH1	H13
IIH2	I11

SSB: I/O3: Switch


B 14 C
I/O3: SWITCH
B 14 C
C-SC2_SVHS-IN
SC1-R
SC1-G
SC2-G
SC1-B
SC2-B_C-OUT
R-SC1_V-IN
SWITCH-MAIN
G-SC1-IN_Y-IN
B-SC1-IN_U-IN
74HC4053
7I12
MUXDX
2I50
100n
+5VIO
3ID5
10R
3IE7
10R
3IN8
10R
BC857BW
7I27
7I29
7I31
3IC8
3ID9
3IH7
560R
3IS4
3IN2
3IN3
3I85
3I93
3IP9
75R
9I62
9I63
9I64
9I65
9I66
9I67
res
SUB-V
SUB-Y
SUB-U
SWITCH-SUB
3IL3
3IM0
3IN0
7I26
7I28
7I30
3IL1
3IL8
3IM4
2I49
7I33
9I25
9I26
9I27
9I37
9I59
9I61
RES
+5V
3IN4
2R2
IIB1
2IA9
100u
SC2-FBL-IN
SC2-FBL
SC1-FBL
FBL-SC1-IN
SC1-FBL-IN
9I41
9I79
9I42
9IA2
3IO5
10K
3IO6
7I32
2IC3
B2,B14a,b,c
B14b,c
B14c(2x),f,g,B15b
B14c,B15b
B15a
B2
B6a
SNDR-DVI-IN
SNDL-DVI-IN
3IE3
3IE2
100R
3IE9
3IF5
22K
2I57
2I58
100p
II50
II51
3IF7
3IF6
6I90
6I91
6I92
6I93
IIB2
IIB3
BZX384-C6V8
FIB0
FIB1
1I68
1I69
1I07
YKC21-3226
2FH
V-PIP+MAIN-OUT
Y-PIP+MAIN-OUT
U-PIP+MAIN-OUT
9I87
9I89
9I90
IID8
IID9
IIE0
3IFA
3IFB
3IFC
100K
R-VGA
G-VGA
B-VGA
TRI-STATE-DVI
B14g(2x)
7I80
2IR0
9IF0
9IF1
9IF2
3IFE
4K7
7I82
BC847BW
IIH3
3IFL
1K0
RESERVED
VA50-PIP
HA50-PIP
II39
IIE1
3IFF
3IFD
VS-2FH
HS-2FH
B14c,B19a
B14g,B19a
B6a,B15c
B6a,B15b,c
7I81
2IR1
9IF3
9IF4
RESERVED
8204 000 8340.4
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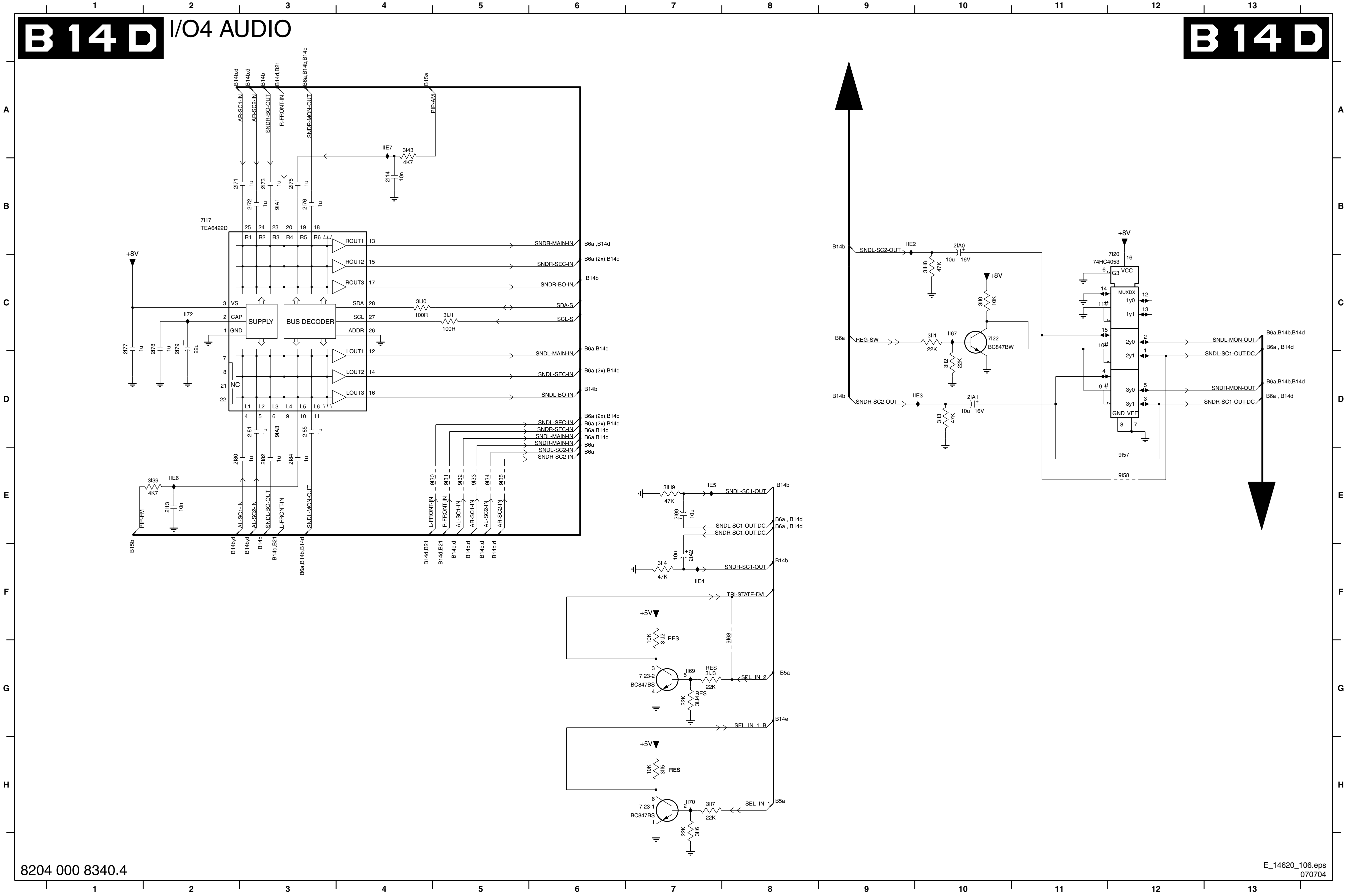
231204

1I07	I2
1I68	I2
1I69	I3
2I49	D7
2I50	D3
2I57	H2
2I58	H3
2IA9	E9
2IC3	D12
2IR0	H7
2IR1	H12
3I85	B1
3I93	C1
3IC8	B4
3ID5	B3
3ID9	C4
3IE2	G3
3IE3	G2
3IE7	D3
3IE9	G2
3IF5	G3
3IF6	H3
3IF7	H2
3IFA	G6
3IFB	H6
3IFC	H6
3IFD	H11
3IFE	I8
3IFF	G11
3IFL	I8
3IH7	D4
3IL1	A8
3IL3	B8
3IL8	C8
3IM0	C8
3IM4	D8
3IN0	D8
3IN2	B2
3IN3	C2
3IN4	E9
3IN8	E3
3IO5	B11
3IO6	A11
3IP9	D1
3IS4	B2
6I90	H2
6I91	H2
6I92	H3
6I93	H3
7I12	C3
7I26	B8
7I27	B4
7I28	C8
7I29	D4
7I30	D8
7I31	E4
7I32	D12
7I33	C7
7I80	H7
7I81	H12
7I82	I8
9I25	D7
9I26	D7
9I27	D7
9I37	A7
9I41	A12
9I42	B11
9I59	A7
9I61	A7
9I62	E2
9I63	D2
9I64	D2
9I65	A2
9I66	A2
9I67	A2
9I79	A12
9I87	G6
9I89	G6
9I90	H6
9IA2	B11
9IF0	F7
9IF1	I7
9IF2	I7
9IF3	I12
9IF4	F12
FIB0	I2
FIB1	I3
II39	G12
II50	H2
II51	H3
IIB1	E9
IIB2	H2
IIB3	H3
IID8	G6
IID9	G6
IIE0	H6
IIE1	H11
IIH3	I8

SSB: I/O4: Audio


B14D
I/O4 AUDIO
B14D
7I17
TEA6422D
SUPPLY
BUS DECODER
VS
CAP
GND
NC
SDA
SCL
ADDR
ROUT1
ROUT2
ROUT3
LOUT1
LOUT2
LOUT3
R1 R2 R3 R4 R5 R6
L1 L2 L3 L4 L5 L6
+8V
II72
IIE6
IIE7
3I39 4K7
3I43 4K7
3IJ0 100R
3IJ1 100R
2I77 1u
2I78 1u
2I79 22u
2I13 10n
2I14 10n
2I71 1u
2I72 1u
2I73 1u
2I75 1u
2I76 1u
2I80 1u
2I81 1u
2I82 1u
2I84 1u
2I85 1u
9IA1
9IA3
AR-SC1-IN
AR-SC2-IN
SNDR-BO-OUT
R-FRONT-IN
SNDR-MON-OUT
PIP-AM
PIP-FM
AL-SC1-IN
AL-SC2-IN
SNDL-BO-OUT
L-FRONT-IN
SNDL-MON-OUT
SNDR-MAIN-IN
SNDR-SEC-IN
SNDR-BO-IN
SDA-S
SCL-S
SNDL-MAIN-IN
SNDL-SEC-IN
SNDL-BO-IN
SNDL-SC2-IN
SNDR-SC2-IN
9I30 9I31 9I32 9I33 9I34 9I35
B6a ,B14d
B6a (2x),B14d
B14b
B6a,B14d
B14b,d
B14d,B21
B6a,B14b,B14d
B15a
B15b
SNDL-SC2-OUT
SNDR-SC2-OUT
REG-SW
IIE2
IIE3
3IH8 47K
3II3 47K
2IA0 10u 16V
2IA1 10u 16V
3II0 10K
3II1 22K
3II2 22K
II67
7I22
BC847BW
7I20
74HC4053
MUXDX
VCC
G3
GND VEE
1y0 1y1 2y0 2y1 3y0 3y1
SNDL-MON-OUT
SNDL-SC1-OUT-DC
SNDR-MON-OUT
SNDR-SC1-OUT-DC
B6a , B14d
9I57
9I58
3IH9 47K
3II4 47K
IIE5
IIE4
2I99 10u
2IA2 10u
SNDL-SC1-OUT
SNDR-SC1-OUT
TRI-STATE-DVI
+5V
3IJ2 10K RES
3IJ3 22K RES
3IJ4 22K RES
II69
7I23-2
BC847BS
9I68
SEL_IN_2
SEL_IN_1_B
B14e
B5a
3II5 10K RES
3II6 22K
3II7 22K
II70
7I23-1
BC847BS
SEL_IN_1

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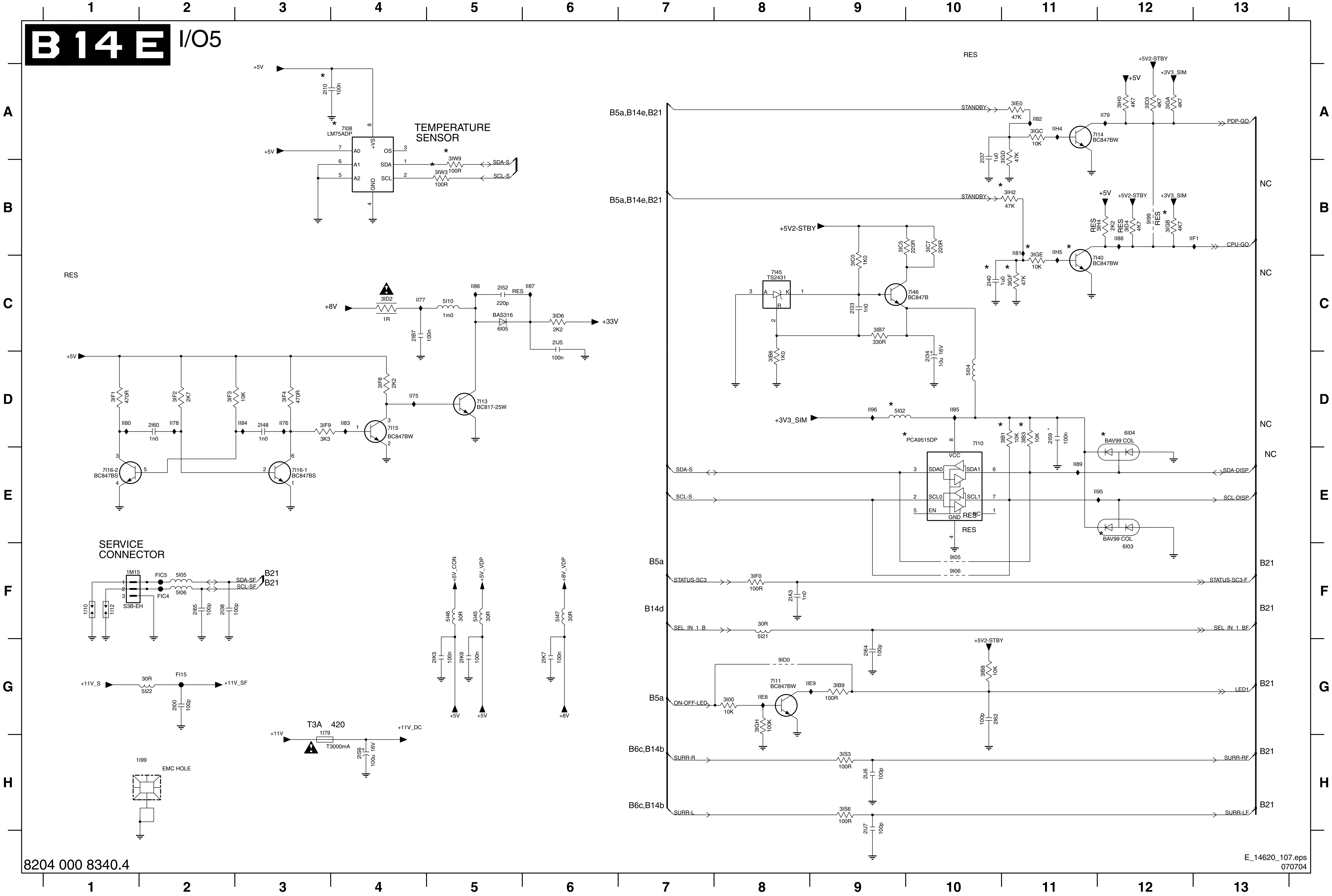
2I13	E2
2I14	B4
2I71	B2
2I72	B3
2I73	B3
2I75	B3
2I76	B3
2I77	C1
2I78	C2
2I79	C2
2I80	E2
2I81	D3
2I82	E3
2I84	E3
2I85	D3
2I99	E7
2IA0	B10
2IA1	D10
2IA2	F7
3I39	E2
3I43	A4
3IH8	C10
3IH9	E7
3II0	C10
3II1	C10
3II2	D10
3II3	D10
3II4	F7
3II5	H7
3II6	H7
3II7	H7
3IJ0	C4
3IJ1	C5
3IJ2	F7
3IJ3	G7
3IJ4	G7
7I17	B2
7I20	C12
7I22	C10
7I23-1	H7
7I23-2	G7
9I30	E5
9I31	E5
9I32	E5
9I33	E5
9I34	E5
9I35	E5
9I57	E12
9I58	E12
9I68	F8
9IA1	B3
9IA3	D3
II67	C10
II69	G7
II70	H7
II72	C2
IIE2	B9
IIE3	D10
IIE4	F7
IIE5	E7
IIE6	E2
IIE7	A4

SSB: I/O5

1I10 F1
1I12 F1
1I79 H3
1I99 H1
1M15 F1
2I00 G2
2I10 A3
2I33 C9
2I34 D10
2I37 A10
2I38 F2
2I40 C10
2I48 D3
2I52 C5
2I59 D11
2I60 D2
2I62 G10
2I64 G9
2I65 F2
2IA3 F8
2IB7 C4
2IJ5 C6
2IJ6 H9
2IJ7 H9
2IK5 G5
2IK6 G5
2IK7 G6
2IS6 H4
3I00 G8
3IB1 D11
3IB3 D11
3IB6 D8
3IB7 C9
3IB8 G10
3IB9 G9
3IC0 C9
3IC5 B9
3IC7 B10
3ID2 C4
3ID3 A12
3ID4 B12
3ID6 C6
3IE0 A11
3IF0 F8
3IF1 D1
3IF2 D2
3IF3 D2
3IF4 D3
3IF8 D4
3IF9 D3
3IGA A12
3IGB B12
3IGC A11
3IGD A11
3IGE C11
3IGF C11
3IGH G8
3IH0 A12
3IH2 B11
3IH4 B12
3IS3 H9
3IS6 H9
3IW3 B5
3IW9 B5
5I02 D9
5I04 D10
5I05 F2
5I06 F2
5I10 C5
5I21 F8
5I22 G2
5I45 F5
5I46 F5
5I47 F6
6I03 F12
6I04 D12
6I05 C5
7I08 A4
7I10 D10
7I11 G8
7I13 D5
7I14 A11
7I15 D4
7I16-1 E3
7I16-2 E1
7I40 C11
7I45 C8
7I46 C10
9I05 F10
9I06 F10
9I99 B12
9ID0 G8
FI15 G2
FIC4 F2
FIC5 F2
II75 D4
II76 D3
II77 C4
II78 D2
II79 A12
II80 D1
II81 B11
II82 A11
II83 D4
II84 D3
II85 D10
II86 C5
II87 C6
II88 B12
II89 E11
II95 E12
II96 D9
IIE8 G8
IIE9 G9
IIF1 B13
IIH4 A11
IIH5 B11


B14E
I/O5
TEMPERATURE SENSOR
7I08 LM75ADP
A0 A1 A2 +VS OS SDA SCL GND
3IW9 100R
3IW3 100R
SDA-S
SCL-S
RES
+5V
+8V
3ID2 1R
5I10 1m0
2IB7 100n
2I52 220p
BAS316 6I05
3ID6 2K2
2IJ5 100n
+33V
3IF1 470R
3IF2 2K7
3IF3 10K
3IF4 470R
3IF8 2K2
2I60 1n0
2I48 1n0
3IF9 3K3
7I15 BC847BW
7I13 BC817-25W
7I16-2 BC847BS
7I16-1 BC847BS
SERVICE CONNECTOR
1M15 S3B-EH
FIC5 FIC4
5I05 5I06
SDA-SF SCL-SF
B21
2I65 100p
2I38 100p
1I10 1I12
+11V_S
30R 5I22
FI15
2I00 100p
+11V_SF
+11V
T3A 420
1I79 T3000mA
2IS6 100u 16V
+11V_DC
1I99 EMC HOLE
+5V_CON
+5V_VDP
+8V_VDP
5I46 30R
5I45 30R
5I47 30R
2IK5 100n
2IK6 100n
2IK7 100n
B5a,B14e,B21
STANDBY
3IE0 47K
3IGC 10K
3IGD 47K
2I37 1u0
7I14 BC847BW
3IH0 4K7
3ID3 4K7
3IGA 4K7
+5V2-STBY
+3V3_SIM
PDP-GO
NC
3IH2 47K
3IGE 10K
3IGF 47K
2I40 1u0
7I40 BC847BW
3IH4 4K7
3ID4 4K7
9I99
3IGB 4K7
CPU-GO
7I45 TS2431
3IC0 1K0
3IC5 220R
3IC7 220R
7I46 BC847B
2I33 1n0
3IB7 330R
3IB6 1K0
2I34 10u 16V
5I04
5I02
+3V3_SIM
PCA9515DP
7I10
VCC SDA0 SDA1 SCL0 SCL1 EN NC GND
3IB1 10K
3IB3 10K
2I59 100n
BAV99 COL 6I04
BAV99 COL 6I03
SDA-DISP
SCL-DISP
9I05
9I06
B5a
STATUS-SC3
3IF0 100R
2IA3 1n0
STATUS-SC3-F
B14d
SEL_IN_1_B
30R 5I21
2I64 100p
SEL_IN_1_BF
9ID0
7I11 BC847BW
ON-OFF-LED
3I00 10K
3IGH 100K
3IB9 100R
3IB8 10K
2I62 100p
LED1
B6c,B14b
SURR-R
3IS3 100R
2IJ6 100p
SURR-RF
SURR-L
3IS6 100R
2IJ7 100p
SURR-LF
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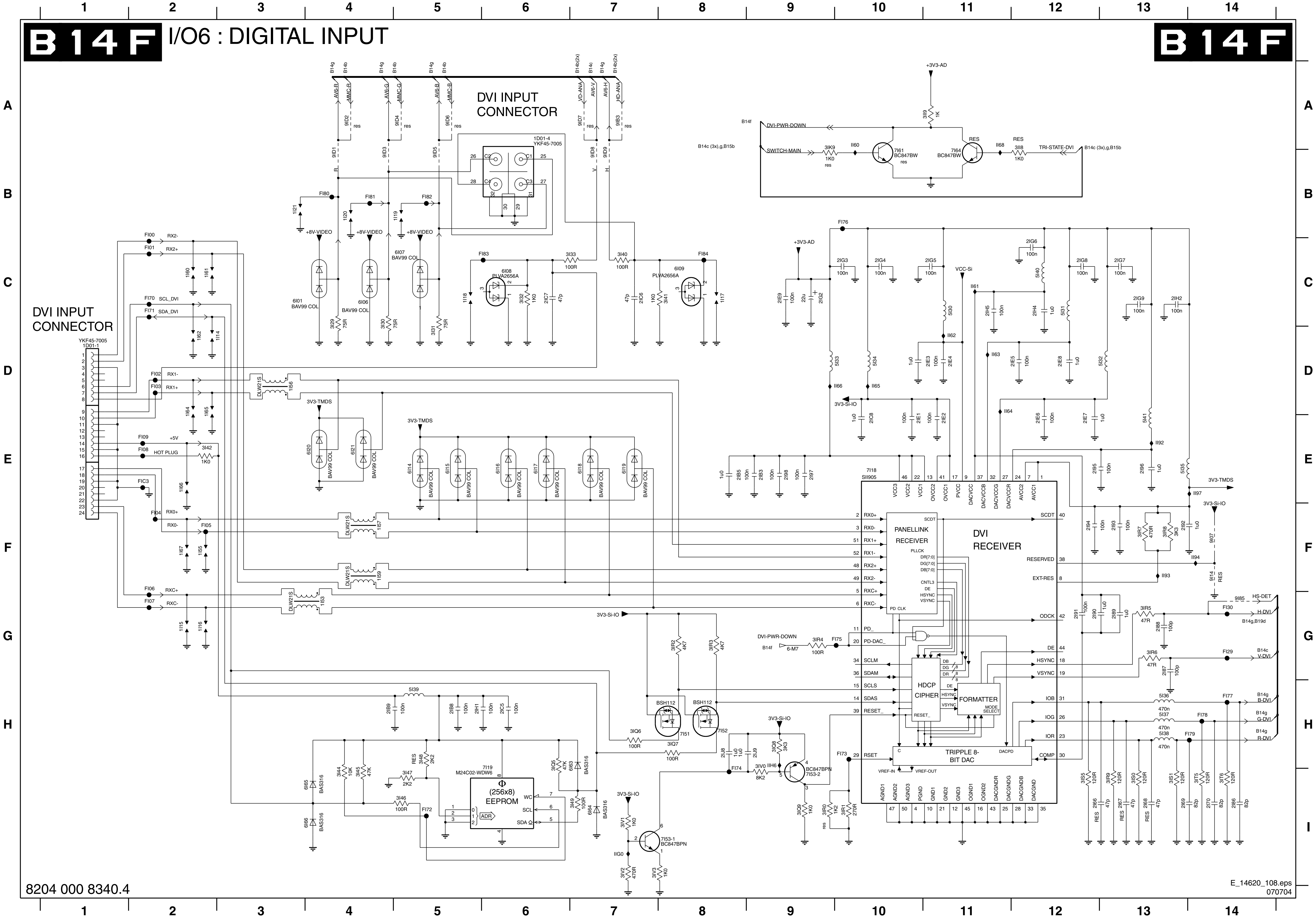
SSB: I/O6: Digital Input


B14F
I/O6 : DIGITAL INPUT
B14F
DVI INPUT CONNECTOR
DVI INPUT CONNECTOR
YKF45-7005
1D01-1
1D01-4
YKF45-7005
DVI RECEIVER
PANELLINK RECEIVER
7I18
SII905
HDCP CIPHER
FORMATTER
TRIPPLE 8-BIT DAC
7I19
M24C02-WDW6
(256x8)
EEPROM
BAV99 COL
PLVA2656A
BSH112
BAS316
BC847BW
BC847BPN
DLW21S
+8V-VIDEO
3V3-TMDS
3V3-Si-IO
+3V3-AD
VCC-Si
DVI-PWR-DOWN
SWITCH-MAIN
TRI-STATE-DVI
HOT PLUG
HS-DET
H-DVI
V-DVI
B-DVI
G-DVI
R-DVI
8204 000 8340.4
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070704

1D01-1	D1
1D01-4	A6
1I14	D2
1I15	G2
1I16	G2
1I17	C8
1I18	C5
1I19	B5
1I20	B4
1I21	B3
1I53	G4
1I55	F2
1I56	D3
1I57	F4
1I59	F4
1I60	C2
1I61	C2
1I62	D2
1I64	D2
1I65	D2
1I66	E2
1I67	F2
2I66	I12
2I67	I13
2I68	I13
2I69	I13
2I70	I14
2I86	I14
2I87	G13
2I88	G13
2I89	G13
2I90	G12
2I91	G12
2I92	F13
2I93	F13
2I94	F12
2I95	E12
2I96	E13
2I97	E9
2I98	E9
2IB3	E9
2IB5	E8
2IB8	H5
2IB9	H4
2IC5	H6
2IC6	C7
2IC7	C6
2IC8	E10
2IE1	E10
2IE2	E11
2IE3	D11
2IE4	D11
2IE5	D12
2IE6	E12
2IE7	E12
2IE8	D12
2IE9	C9
2IG2	C9
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2IH2	C13
2IH4	C12
2IH5	C11
2IJ8	H8
2IJ9	H9
3I29	C4
3I30	C4
3I31	D5
3I32	C6
3I33	C7
3I40	C7
3I41	C8
3I42	E2
3I44	I4
3I45	I4
3I46	I5
3I47	I5
3I48	H5
3I49	I7
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3IQ6	H7
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3IQ8	H9
3IQ9	I9
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3IR5	G13
3IR6	G13
3IR7	F13
3IR8	F13
3IR9	I13
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3IS1	I13
3IS5	I12
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3IT6	I14
3IV0	H9
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3IV2	I7
3IV3	I7
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5I32	D13
5I33	D10
5I34	D10
5I35	E13
5I36	H13
5I37	H13
5I38	H13
5I39	H5
5I40	C12
5I41	E13
6I01	C3
6I06	C4
6I07	C5
6I08	C6
6I09	C8
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6I17	E6
6I18	E7
6I19	E7
6I20	E4
6I21	E4
6I63	H7
6I64	I7
6I65	I4
6I66	I4
7I18	E10
7I19	I6
7I51	H8
7I52	H8
7I53-1	I8
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7I61	B10
7I64	B11
9I07	F14
9I14	F14
9I85	G14
9IB3	A7
9ID1	B4
9ID2	A4
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9ID7	A7
9ID8	B7
9ID9	B7
FI00	B2
FI01	C2
FI02	D2
FI03	D2
FI04	F2
FI05	F2
FI06	F2
FI07	G2
FI08	E2
FI09	E2
FI29	G14
FI30	G14
FI70	C2
FI71	C2
FI72	I5
FI73	H10
FI74	I8
FI75	G10
FI76	B10
FI77	H14
FI78	H14
FI79	H14
FI80	B4
FI81	B4
FI82	B5
FI83	C6
FI84	C8
FIC3	E2
II60	A10
II61	C11
II62	D11
II63	D11
II64	D11
II65	D10
II66	D10
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II92	E13
II93	F13
II94	F14
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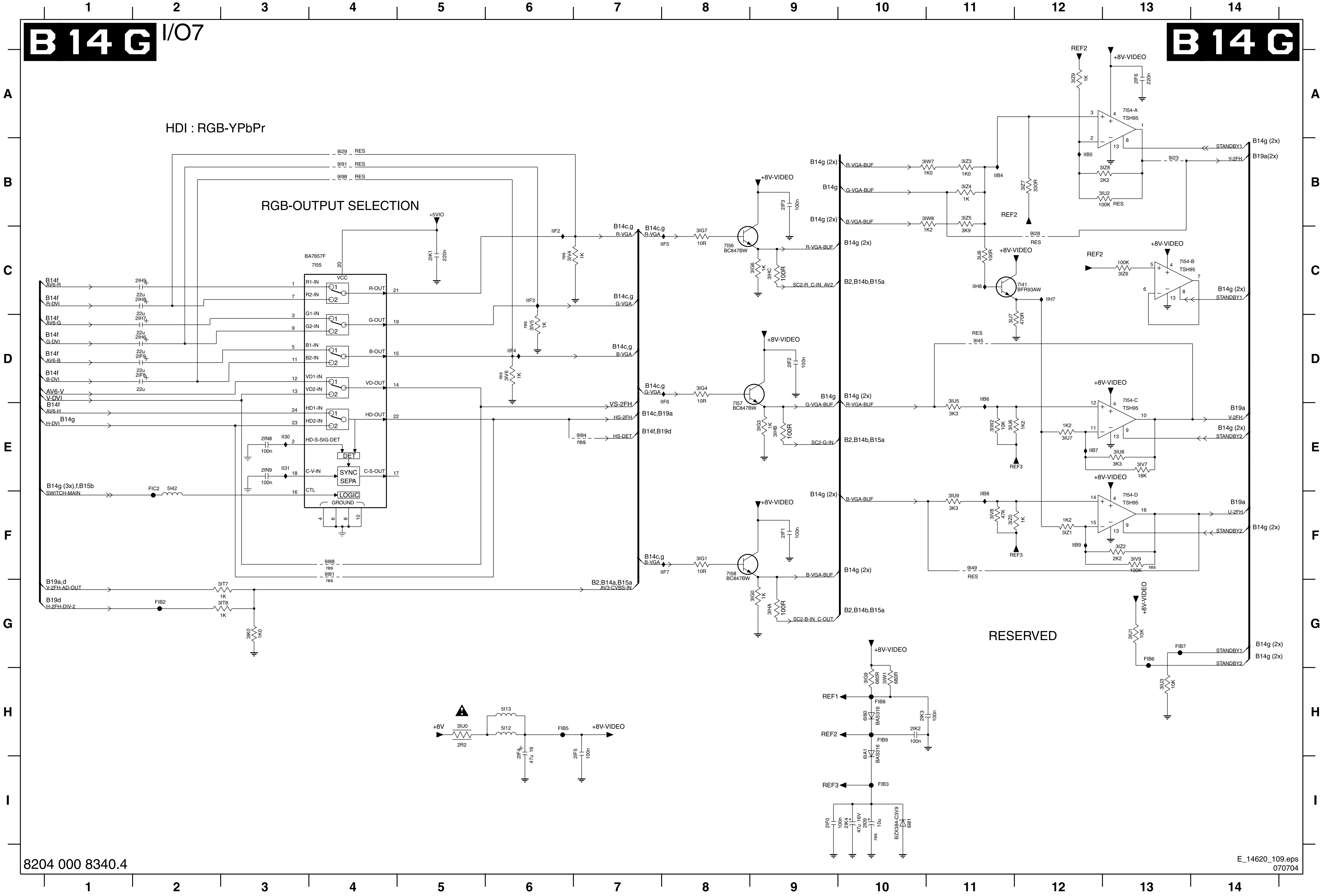
IIH6	H9

SSB: I/O7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RGB-OUTPUT SELECTION
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VCC
R1-IN
R2-IN
G1-IN
G2-IN
B1-IN
B2-IN
VD1-IN
VD2-IN
HD1-IN
HD2-IN
HD-S-SIG-DET
C-V-IN
CTL
R-OUT
G-OUT
B-OUT
VD-OUT
HD-OUT
C-S-OUT
DET
SYNC SEPA
LOGIC
GROUND
+5VIO
+8V-VIDEO
REF1
REF2
REF3
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7I57 BC847BW
7I58 BC847BW
7I41 BFR93AW
7I54-A TSH95
7I54-B TSH95
7I54-C TSH95
7I54-D TSH95
B14f AV6-R
B14f R-DVI
B14f AV6-G
B14f G-DVI
B14f AV6-B
B14f B-DVI
AV6-V
V-DVI
B14f AV6-H
B14g H-DVI
B14g (3x),f,B15b SWITCH-MAIN
B19a,d V-2FH-AD-OUT
B19d H-2FH-DIV-2
B14c,g R-VGA
B14c,g G-VGA
B14c,g B-VGA
VS-2FH
HS-2FH
HS-DET
B14c,B19a
B14f,B19d
B2,B14a,B15a AV3-CVBS-IN
B14g (2x) R-VGA-BUF
B14g G-VGA-BUF
B14g (2x) B-VGA-BUF
SC2-R_C-IN_AV2
SC2-G-IN
SC2-B-IN_C-OUT
B2,B14b,B15a
STANDBY1
STANDBY2
Y-2FH
V-2FH
U-2FH
B19a
B19a(2x)
B14g (2x)
RESERVED
+8V
FIB5
BAS316
BZX384-C3V9
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2IF1	F9
2IF2	D9
2IF3	B9
2IF4	H6
2IF5	H7
2IF6	A13
2IF8	D2
2IF9	D2
2IH6	D2
2IH7	D2
2IH8	C2
2IH9	C2
2IK1	C5
2IK2	H10
2IK3	H10
2IK4	I10
2IN8	E3
2IN9	E3
3IG0	F9
3IG1	F8
3IG3	D9
3IG4	D8
3IG6	B9
3IG7	C8
3IG9	H10
3IHA	G9
3IHB	E9
3IHC	C9
3IJ6	C11
3IJ7	D11
3IK0	G3
3IT7	G3
3IT8	G3
3IU0	H5
3IU1	G13
3IU2	B13
3IU3	H13
3IU5	D11
3IU6	E11
3IU7	E12
3IU8	E13
3IU9	F11
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3IV5	D6
3IV6	D6
3IV7	E13
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3IV9	F13
3IW1	H10
3IW2	E11
3IW7	B11
3IW8	B11
3IZ0	F11
3IZ1	F12
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3IZ6	C13
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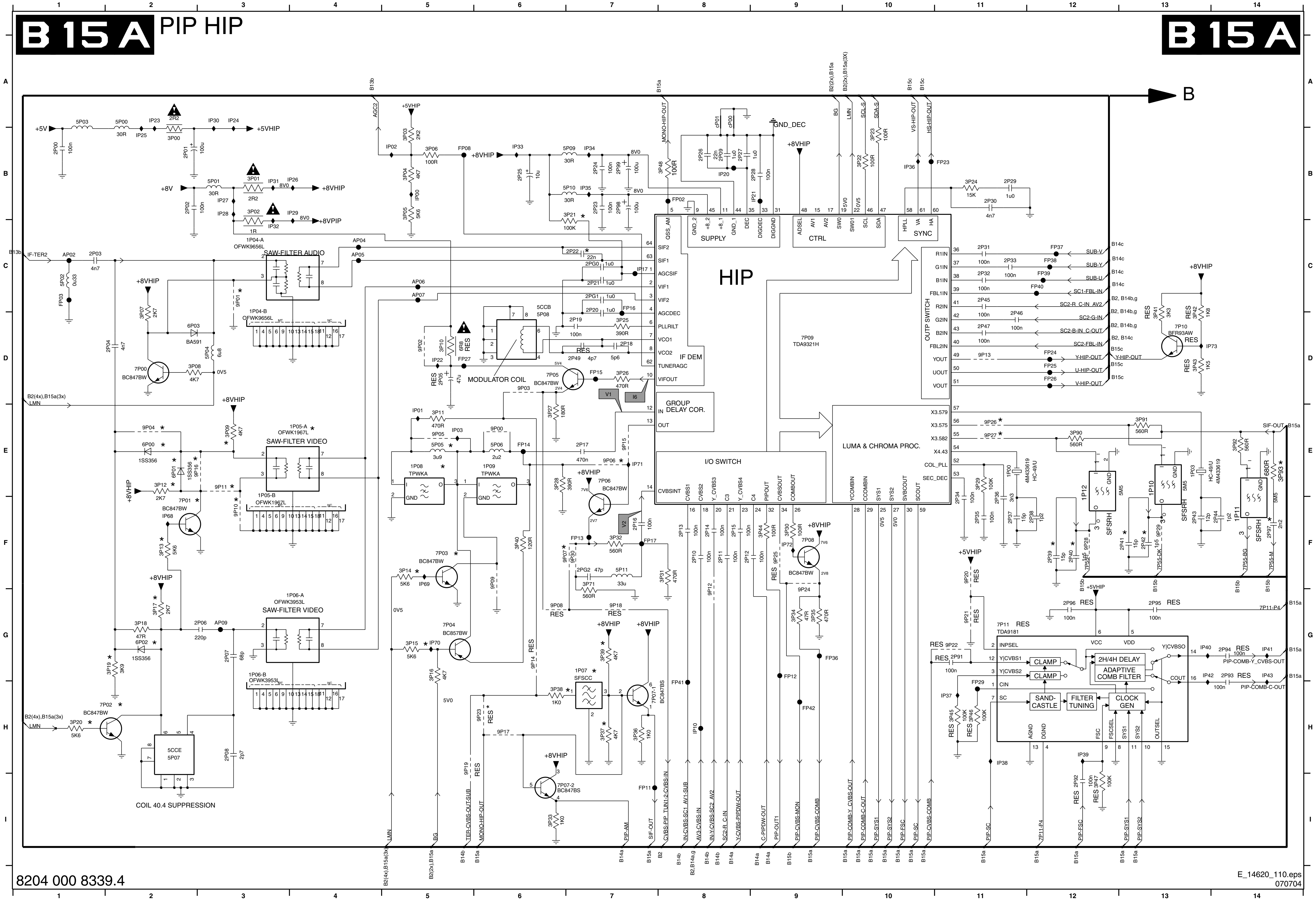
3IZ8	B13
3IZ9	A12
5I12	H6
5I13	H6
5I42	E2
6I80	H10
6I81	I10
6IA1	H10
7I41	C12
7I54-A	A13
7I54-B	C13
7I54-C	D13
7I54-D	F13
7I55	C4
7I56	C8
7I57	E8
7I58	F8
9I23	B13
9I28	C12
9I29	B4
9I45	D11
9I49	F11
9I81	F4
9I84	E7
9I88	F4
9I91	B4
9I98	B4
FIB2	G2
FIB3	I10
FIB5	H6
FIB6	G13
FIB7	G13
FIB8	H10
FIB9	H10
FIC2	E2
II30	E3
II31	E3
IIB4	B11
IIB5	B12
IIB6	D11
IIB7	E12
IIB8	F11
IIB9	F12
IIF2	C6
IIF3	C6
IIF4	D6
IIF5	C8
IIF6	D8
IIF7	F8
IIH7	C12
IIH8	C11

SSB: PIP HIP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PIP HIP
B15A
HIP
SUPPLY
CTRL
SYNC
IF DEM
GROUP DELAY COR.
I/O SWITCH
LUMA & CHROMA PROC.
OUTP SWITCH
7P09 TDA9321H
SAW-FILTER AUDIO
1P04-A OFWK9656L
1P04-B OFWK9656L
SAW-FILTER VIDEO
1P05-A OFWK1967L
1P05-B OFWK1967L
SAW-FILTER VIDEO
1P06-A OFWK3953L
1P06-B OFWK3953L
MODULATOR COIL
COIL 40.4 SUPPRESSION
1P08 TPWKA
1P09 TPWKA
1P07 SFSCC
7P11 TDA9181
CLAMP
CLAMP
2H/4H DELAY
ADAPTIVE COMB FILTER
SAND-CASTLE
FILTER TUNING
CLOCK GEN
+5V
+5VHIP
+8V
+8VHIP
+8VPIP
GND_DEC
B
8204 000 8339.4
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1P00 E11
1P03 E13
1P04-A C3
1P04-B D3
1P05-A E4
1P05-B F3
1P06-A G4
1P06-B G3
1P07 G7
1P08 E5
1P09 E6
1P10 E13
1P11 F14
1P12 E12
2P00 B1
2P01 B2
2P02 B2
2P03 C1
2P04 D2
2P05 D5
2P06 G3
2P07 G3
2P08 H3
2P09 B8
2P10 F8
2P11 F8
2P12 F8
2P13 F8
2P14 F8
2P15 F8
2P16 F7
2P17 E7
2P18 D7
2P19 D7
2P20 C7
2P21 C7
2P22 C7
2P23 B7
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2P25 B6
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2P27 B8
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2P99 B7
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2PG1 C7
2PG2 F7
3P00 B2
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3P02 B3
3P03 B5
3P04 B5
3P05 B5
3P06 B5
3P07 D2
3P08 D2
3P09 E3
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3P17 G2
3P18 G2
3P19 G2
3P20 H1
3P21 B7
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3P25 D7
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3P33 I6
3P34 G9
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3P36 H7
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3P38 H6
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5P05 E5
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5P09 B7
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6P00 E2
6P01 E2
6P02 G2
6P03 D2
7P00 D2
7P01 F2
7P02 H1
7P03 F5
7P04 G5
7P05 D6
7P06 E7
7P07-1 H7
7P07-2 I6
7P08 F9
7P09 D9
7P10 D13
7P11 G11
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9P02 D5
9P03 D6
9P04 E2
9P05 E5
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9P07 F7
9P08 G6
9P09 F6
9P10 F3
9P11 E3
9P12 G8
9P13 D11
9P14 G6
9P15 E7
9P16 E3
9P17 H6
9P18 G7
9P19 H5
9P20 F11
9P21 G11
9P22 G11
9P23 H6
9P24 G9
9P25 F9
9P26 E11
9P27 E11
9P28 F12
9P29 F13
9P30 F7
AP02 C1
AP04 C4
AP05 C4
AP06 C5
AP07 C5
AP09 G3
FP02 B8
FP03 C1
FP08 B5
FP11 I7
FP12 G9
FP13 F7
FP14 E6
FP15 D7
FP16 C7
FP17 F7
FP23 B11
FP24 D12
FP25 D12
FP26 D12
FP27 D5
FP29 H11
FP36 G9
FP37 C12
FP38 C12
FP39 C12
FP40 C12
FP41 H8
FP42 H9
IP00 B5
IP01 E5
IP02 B5
IP03 E5
IP10 H8
IP17 C7
IP20 B8
IP21 B9
IP22 D5
IP23 A2
IP24 A3
IP25 B2
IP26 B4
IP27 B3
IP28 B3
IP29 B4
IP30 A3
IP31 B3
IP32 C3
IP33 B6
IP34 B7
IP35 B7
IP36 B10
IP37 H11
IP38 H11
IP39 H12
IP40 G13
IP41 G14
IP42 G13
IP43 G14
IP68 F2
IP69 F5
IP70 G5
IP71 E7
IP72 F9
IP73 D14
cP00 A8
cP01 A8

SSB: PIP Switch

1P50 E2
2P50 E4
2P51 E1
2P52 F2
2P53 F2
2P54 F2
2P55 G2
2P56 G6
2P57 G6
2P58 F6
2P59 I5
2P60 H6
2P61 I6
2P62 F6
2P63 F7
2P65 F9
2P66 F9
2P70 E6
2P71 E15
2P72 E7
2P73 E8
2P74 D6
2P75 B8
2P76 E1
2P77 E4
2P78 E12
2P79 E7
2P80 F14
2P81 F14
2P87 D2
2P88 D1
2P90 E6
2PE7 H7
2PE8 G7
2PE9 A13
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3P49 B13
3P50 D1
3P51 E1
3P52 E4
3P53 E2
3P54 F2
3P55 I6
3P56 H5
3P57 G6
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3P61 E8
3P62 H6
3P63 H6
3P64 H7
3P65 H15
3P66 G15
3P67 G14
3P68 F14
3P69 F14
3P70 F14
3P72 E14
3P74 E15
3P75 H6
3P76 F5
3P79 D4
3P80 C2
3P81 D4
3P82 D2
3P85 F14
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3P87 C10
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3P94 D5
3P95 D4
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3P98 G6
3P99 G6
3PG7 F7
3PG8 F7
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3PJ1 B12
3PJ2 B12
3PJ3 B12
3PJ4 B13
3PJ5 B14
3PJ6 B14
3PJ7 B14
3PJ8 C14
3PJ9 C15
5P50 D4
5P51 E15
6P10 F8
7P51 D3
7P52 G4
7P52-1 F5
7P53-1 G6
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7P56 G13
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7P58-2 H8
7P59-1 F7
7P59-2 G7
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7P62 B13
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9P31 H6
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9P72 F1
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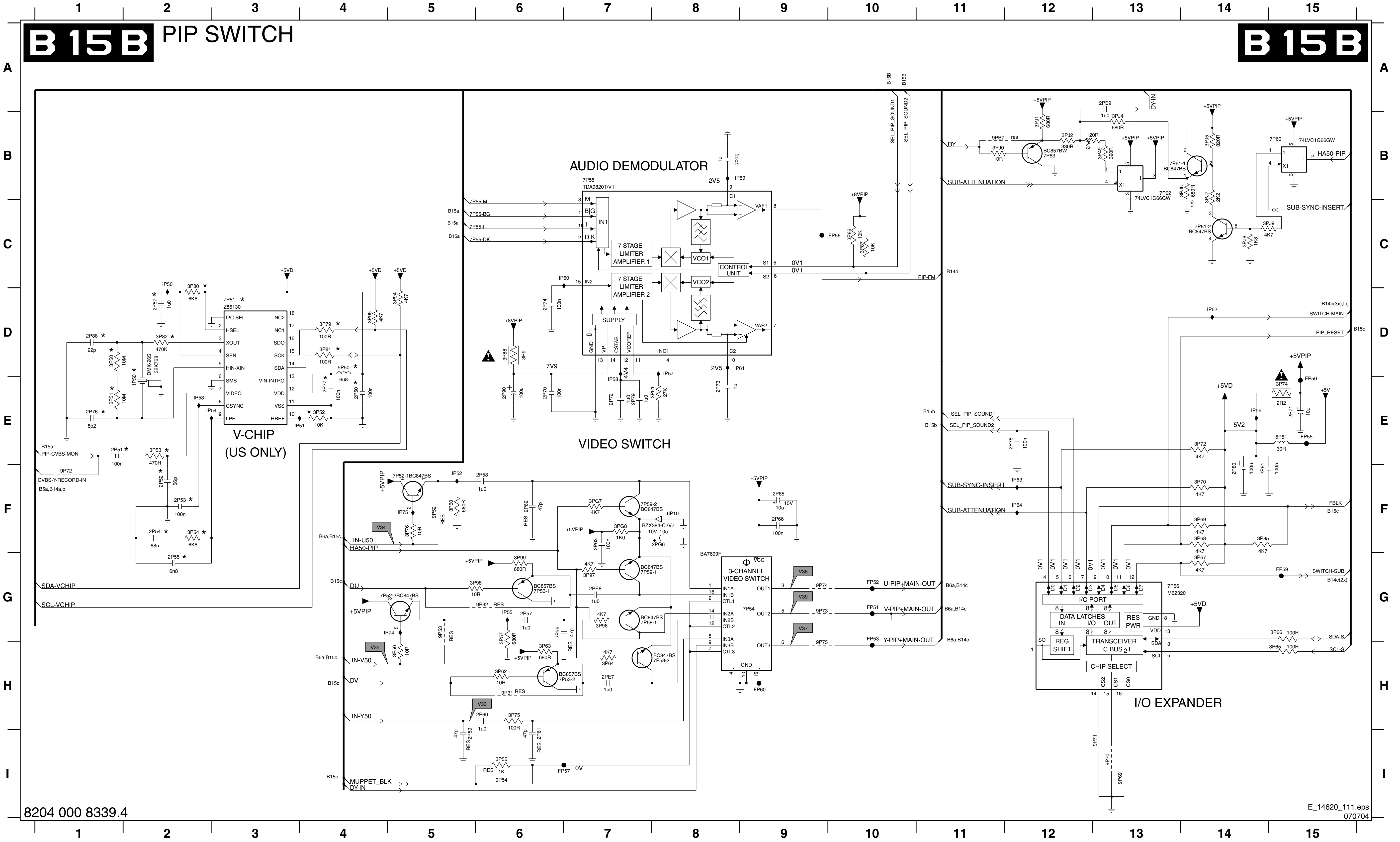
IP75 F5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B 15 B
AUDIO DEMODULATOR
7P55
TDA9820T/V1
7 STAGE LIMITER AMPLIFIER 1
7 STAGE LIMITER AMPLIFIER 2
VCO1
VCO2
CONTROL UNIT
SUPPLY
VAF1
VAF2
SEL_PIP_SOUND1
SEL_PIP_SOUND2
7P55-M
7P55-BG
7P55-I
7P55-DK
PIP-FM
7P51
Z86130
V-CHIP
(US ONLY)
PIP-CVBS-MON
CVBS-Y-RECORD-IN
SDA-VCHIP
SCL-VCHIP
VIDEO SWITCH
BA7609F
3-CHANNEL VIDEO SWITCH
7P54
IN-U50
HA50-PIP
DU
IN-V50
DV
IN-Y50
MUPPET_BLK
DY-IN
U-PIP+MAIN-OUT
V-PIP+MAIN-OUT
Y-PIP+MAIN-OUT
DY
SUB-ATTENUATION
SUB-SYNC-INSERT
74LVC1G66GW
HA50-PIP
SWITCH-MAIN
PIP_RESET
FBLK
SWITCH-SUB
SDA-S
SCL-S
7P56
M62320
I/O PORT
DATA LATCHES
RES PWR
REG SHIFT
TRANSCEIVER C BUS
CHIP SELECT
I/O EXPANDER
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SSB: PIP Muppet

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2PD9 C11
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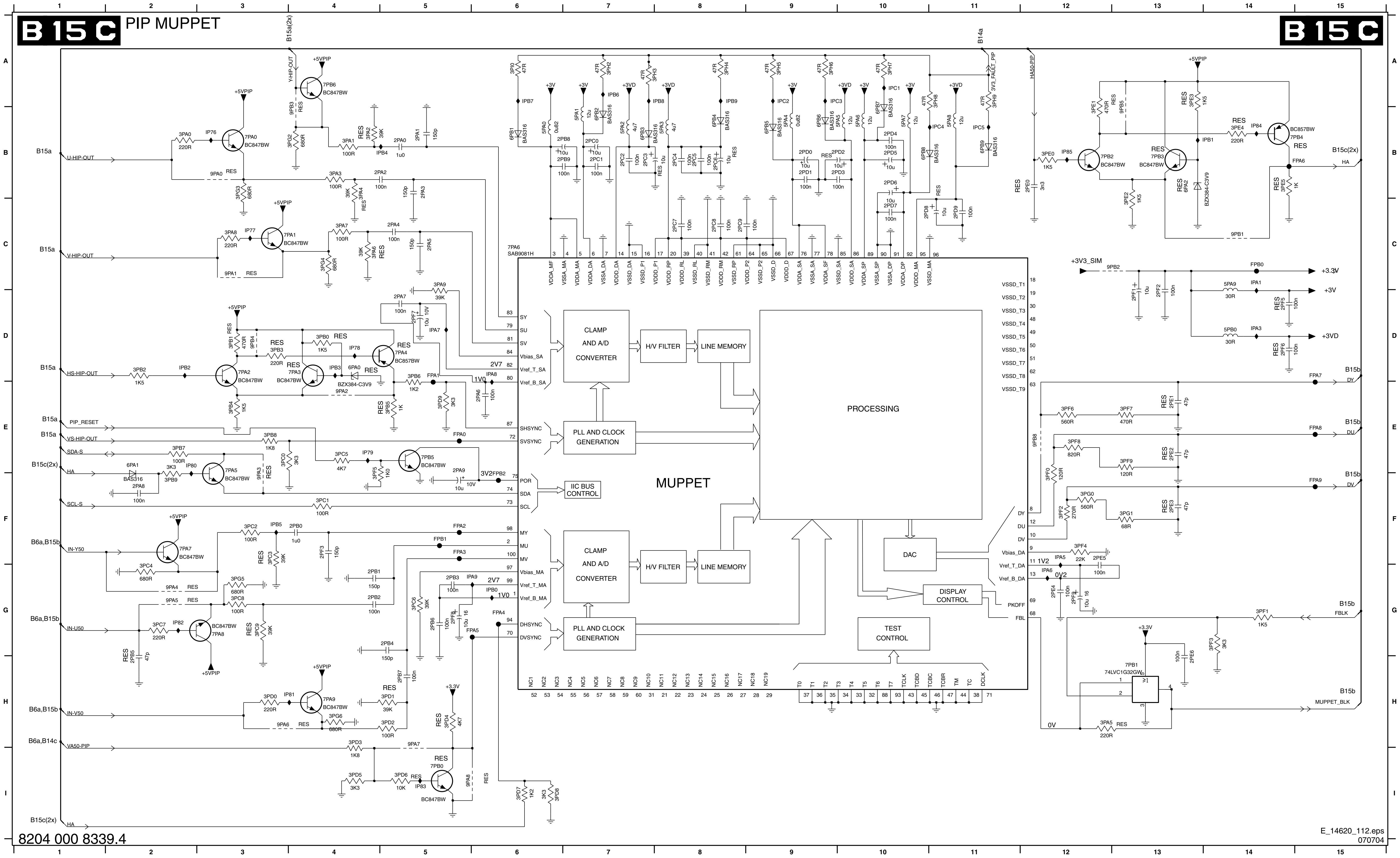
7PB6 A4
9PA0 B3
9PA1 C3
9PA2 E4
9PA3 F3
9PA4 G2
9PA5 G2
9PA6 H3
9PA7 H5
9PA8 I5
9PB1 C14
9PB2 C13
9PB3 B4
9PB4 D3
9PB5 B13
9PB8 E12
FPA0 E5
FPA1 D5
FPA2 F5
FPA3 F5
FPA4 G6
FPA5 G6
FPA6 B15
FPA7 D15
FPA8 E15
FPA9 F15
FPB0 C14
FPB1 F5
FPB2 F6
IP76 B3
IP77 C3
IP78 D4
IP79 E4
IP80 E2
IP81 H4
IP82 G2
IP83 I5
IP84 B14
IP85 B12
IPA1 C14
IPA3 D14
IPA5 F12
IPA6 G12
IPA7 D5
IPA8 D6
IPA9 G6
IPB0 G6
IPB1 B14
IPB2 D2
IPB3 D4
IPB4 B5
IPB5 F3
IPB6 A7
IPB7 A6
IPB8 A8
IPB9 A8
IPC1 A10
IPC2 A9
IPC3 A9
IPC4 B11
IPC5 B11

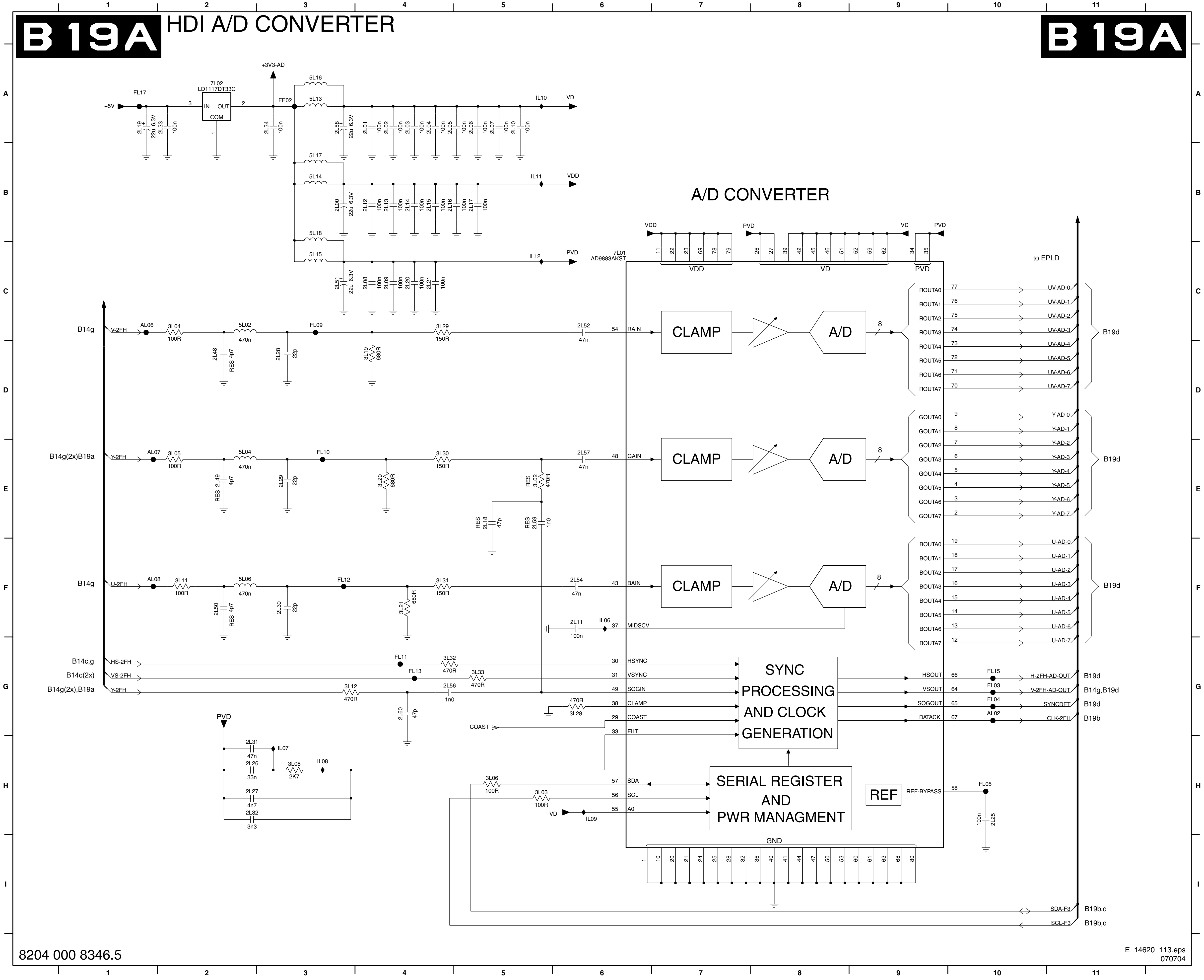


B 15 C
PIP MUPPET
B15a(2x)
B14a
B15a
U-HIP-OUT
V-HIP-OUT
HS-HIP-OUT
PIP_RESET
VS-HIP-OUT
SDA-S
B15c(2x)
HA
SCL-S
B6a,B15b
IN-Y50
IN-U50
IN-V50
B6a,B14c
VA50-PIP
HA50-PIP
3V3_FAULT_PIP
+5VPIP
+3V
+3VD
+3V3_SIM
+3.3V
7PA0 BC847BW
7PA1 BC847BW
7PA2 BC847BW
7PA3 BC847BW
7PA4 BC857BW
7PA5 BC847BW
7PA7 BC847BW
7PA8 BC847BW
7PA9 BC847BW
7PB0 BC847BW
7PB2 BC847BW
7PB3 BC847BW
7PB4 BC857BW
7PB5 BC847BW
7PB6 BC847BW
6PA0 BZX384-C3V9
6PA1 BAS316
6PA2 BZX384-C3V9
7PA6 SAB9081H
7PB1 74LVC1G32GW
MUPPET
CLAMP AND A/D CONVERTER
H/V FILTER
LINE MEMORY
PROCESSING
PLL AND CLOCK GENERATION
IIC BUS CONTROL
DAC
DISPLAY CONTROL
TEST CONTROL
SY
SU
SV
Vbias_SA
Vref_T_SA
Vref_B_SA
SHSYNC
SVSYNC
POR
SDA
SCL
MY
MU
MV
Vbias_MA
Vref_T_MA
Vref_B_MA
DHSYNC
DVSYNC
DY
DU
DV
Vbias_DA
Vref_T_DA
Vref_B_DA
PKOFF
FBL
2V7
1V0
3V2
1V2
0V2
0V
B15b
FBLK
MUPPET_BLK
RES

8204 000 8339.4

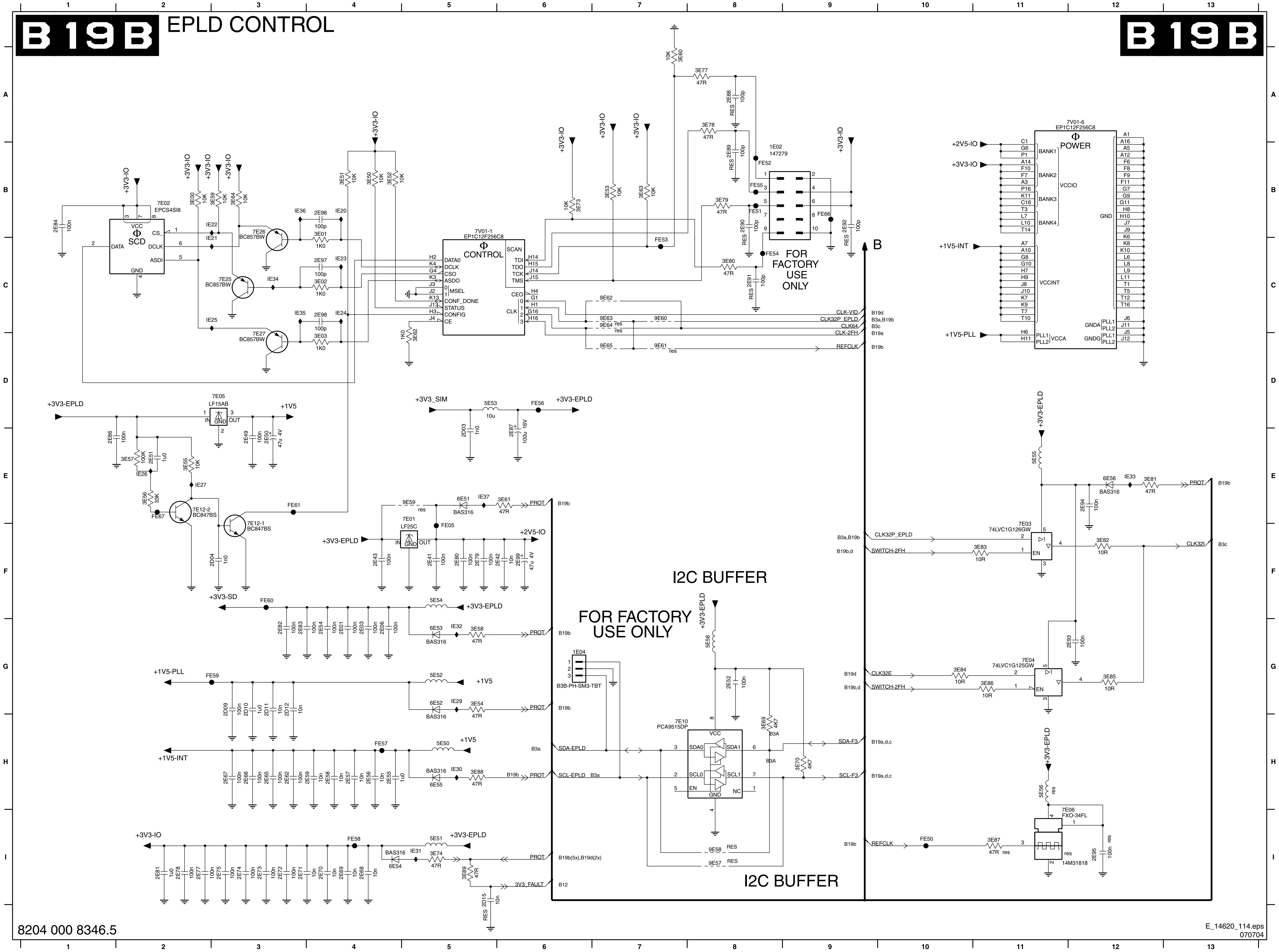
E_14620_112.eps
070704

SSB: HDI A/D Converter


B19A
HDI A/D CONVERTER
B19A
A/D CONVERTER
+5V
FL17
2L19 22u 6.3V
2L33 100n
7L02
LD1117DT33C
IN
OUT
COM
+3V3-AD
FE02
2L34 100n
5L16
5L13
5L17
5L14
5L18
5L15
2L58 22u 6.3V
2L01 100n
2L02 100n
2L03 100n
2L04 100n
2L05 100n
2L06 100n
2L07 100n
2L10 100n
IL10
VD
2L00 22u 6.3V
2L12 100n
2L13 100n
2L14 100n
2L15 100n
2L16 100n
2L17 100n
IL11
VDD
2L51 22u 6.3V
2L08 100n
2L09 100n
2L20 100n
2L21 100n
IL12
PVD
7L01
AD9883AKST
VDD
PVD
VD
to EPLD
B14g
V-2FH
AL06
3L04 100R
5L02 470n
FL09
3L29 150R
2L52 47n
2L48 RES 4p7
2L28 22p
3L19 680R
54 RAIN
CLAMP
A/D
8
B14g(2x)B19a
Y-2FH
AL07
3L05 100R
5L04 470n
FL10
3L30 150R
2L57 47n
2L49 RES 4p7
2L29 22p
3L20 680R
RES 3L02 470R
RES 2L18 47p
RES 2L59 1n0
48 GAIN
B14g
U-2FH
AL08
3L11 100R
5L06 470n
FL12
3L31 150R
2L54 47n
2L50 RES 4p7
2L30 22p
3L21 680R
43 BAIN
2L11 100n
IL06
37 MIDSCV
B14c,g
HS-2FH
B14c(2x)
VS-2FH
B14g(2x),B19a
Y-2FH
FL11
FL13
3L32 470R
3L33 470R
3L12 470R
2L56 1n0
2L60 47p
470R 3L28
COAST
30 HSYNC
31 VSYNC
49 SOGIN
38 CLAMP
29 COAST
33 FILT
SYNC PROCESSING AND CLOCK GENERATION
PVD
2L31 47n
IL07
2L26 33n
3L08 2K7
IL08
2L27 4n7
2L32 3n3
3L06 100R
3L03 100R
VD
IL09
57 SDA
56 SCL
55 A0
SERIAL REGISTER AND PWR MANAGMENT
REF
REF-BYPASS 58
FL05
2L25 100n
GND
ROUTA0 77 UV-AD-0
ROUTA1 76 UV-AD-1
ROUTA2 75 UV-AD-2
ROUTA3 74 UV-AD-3
ROUTA4 73 UV-AD-4
ROUTA5 72 UV-AD-5
ROUTA6 71 UV-AD-6
ROUTA7 70 UV-AD-7
B19d
GOUTA0 9 Y-AD-0
GOUTA1 8 Y-AD-1
GOUTA2 7 Y-AD-2
GOUTA3 6 Y-AD-3
GOUTA4 5 Y-AD-4
GOUTA5 4 Y-AD-5
GOUTA6 3 Y-AD-6
GOUTA7 2 Y-AD-7
B19d
BOUTA0 19 U-AD-0
BOUTA1 18 U-AD-1
BOUTA2 17 U-AD-2
BOUTA3 16 U-AD-3
BOUTA4 15 U-AD-4
BOUTA5 14 U-AD-5
BOUTA6 13 U-AD-6
BOUTA7 12 U-AD-7
B19d
HSOUT 66 FL15 H-2FH-AD-OUT B19d
VSOUT 64 FL03 V-2FH-AD-OUT B14g,B19d
SOGOUT 65 FL04 SYNCDET B19d
DATACK 67 AL02 CLK-2FH B19b
SDA-F3 B19b,d
SCL-F3 B19b,d
8204 000 8346.5
E_14620_113.eps
070704

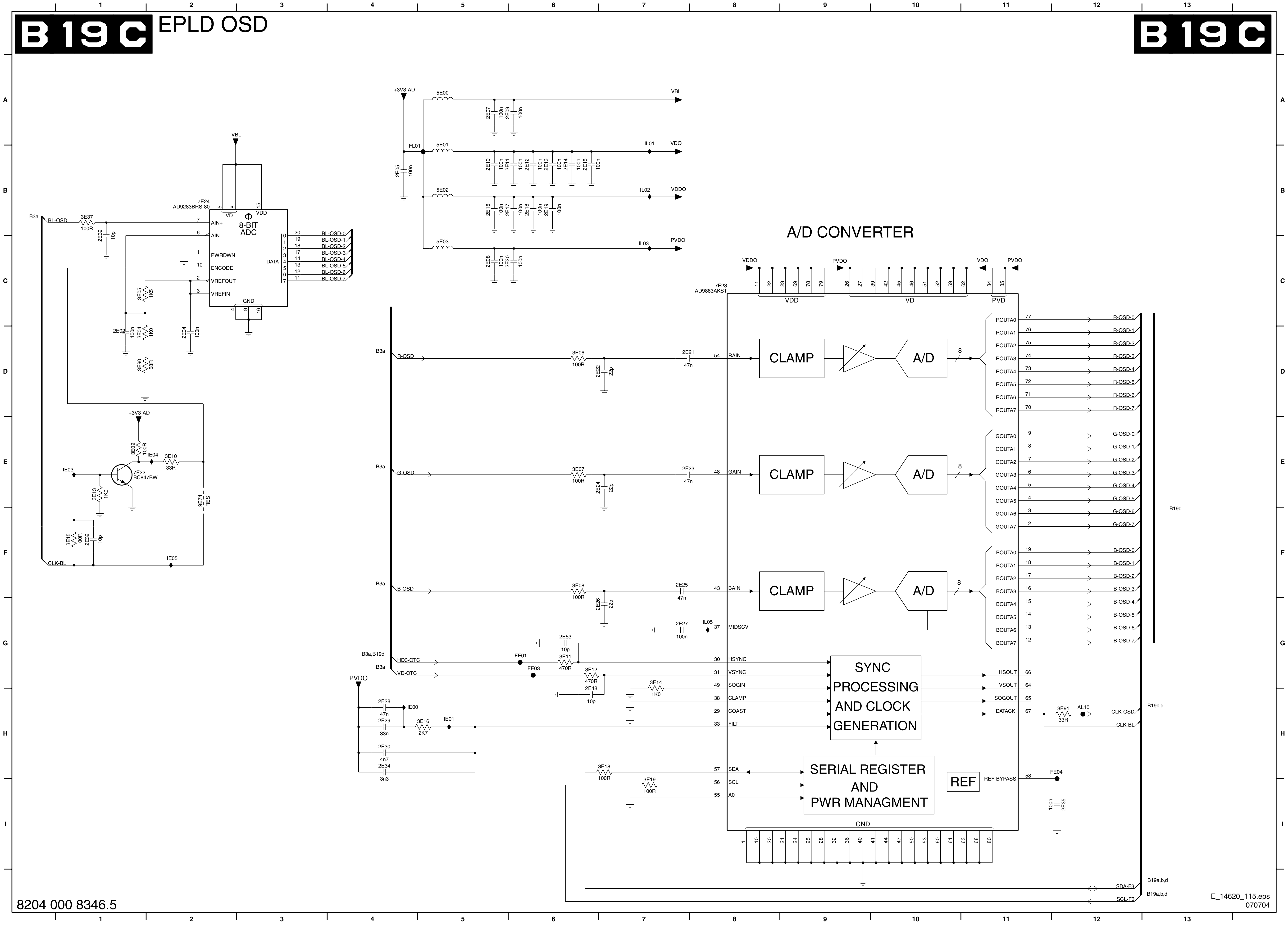
2L00	B3
2L01	A4
2L02	A4
2L03	A4
2L04	A4
2L05	A4
2L06	A5
2L07	A5
2L08	C4
2L09	C4
2L10	A5
2L11	F6
2L12	B4
2L13	B4
2L14	B4
2L15	B4
2L16	B4
2L17	B5
2L18	E5
2L19	A1
2L20	C4
2L21	C4
2L25	H10
2L26	H2
2L27	H2
2L28	D3
2L29	E3
2L30	F3
2L31	H2
2L32	H2
2L33	A2
2L34	A3
2L48	D2
2L49	E2
2L50	F2
2L51	C3
2L52	C6
2L54	F6
2L56	G4
2L57	E6
2L58	A3
2L59	E5
2L60	G4
3L02	E5
3L03	H5
3L04	C2
3L05	E2
3L06	H5
3L08	H3
3L11	F2
3L12	G3
3L19	D4
3L20	E4
3L21	F4
3L28	G6
3L29	C4
3L30	E4
3L31	F4
3L32	G4
3L33	G5
5L02	C2
5L04	E2
5L06	F2
5L13	A3
5L14	B3
5L15	C3
5L16	A3
5L17	B3
5L18	B3
7L01	C6
7L02	A2
AL02	G10
AL06	C1
AL07	E1
AL08	F1
FE02	A3
FL03	G10
FL04	G10
FL05	H10
FL09	C3
FL10	E3
FL11	G4
FL12	F3
FL13	G4
FL15	G10
FL17	A1
IL06	F6
IL07	H3
IL08	H3
IL09	H6
IL10	A5
IL11	B5
IL12	C5

SSB: EPLD Control


B19B
EPLD CONTROL
B19B
7E02 EPCS4SI8
SCD
VCC
DATA
CS
DCLK
ASDI
GND
7E26 BC857BW
7E25 BC857BW
7E27 BC857BW
7V01-1 EP1C12F256C8
CONTROL
DATA0
DCLK
CSO
ASDO
MSEL
CONF_DONE
STATUS
CONFIG
CE
SCAN
TDI
TDO
TCK
TMS
CEO
CLK
1E02 147279
FOR FACTORY USE ONLY
CLK-VID
CLK32P_EPLD
CLK64
CLK-2FH
REFCLK
7V01-6 EP1C12F256C8
POWER
+2V5-IO
+3V3-IO
+1V5-INT
+1V5-PLL
BANK1
BANK2
BANK3
BANK4
VCCIO
VCCINT
VCCA
GND
GNDA
GNDG
7E05 LF15AB
+3V3-EPLD
+1V5
+3V3_SIM
5E53
FE56
7E12-2 BC847BS
7E12-1 BC847BS
7E01 LF25C
+3V3-EPLD
+2V5-IO
PROT
+3V3-SD
+1V5-PLL
+1V5-INT
+3V3-IO
3V3_FAULT
I2C BUFFER
FOR FACTORY USE ONLY
1E04 B3B-PH-SM3-TBT
7E10 PCA9515DP
SDA-EPLD
SCL-EPLD
SDA0
SCL0
SDA1
SCL1
EN
NC
SDA-F3
SCL-F3
I2C BUFFER
7E03 74LVC1G126GW
7E04 74LVC1G125GW
CLK32P_EPLD
SWITCH-2FH
CLK32E
CLK32I
7E06 FXO-34FL
14M31818
REFCLK
B
8204 000 8346.5
E_14620_114.eps
070704

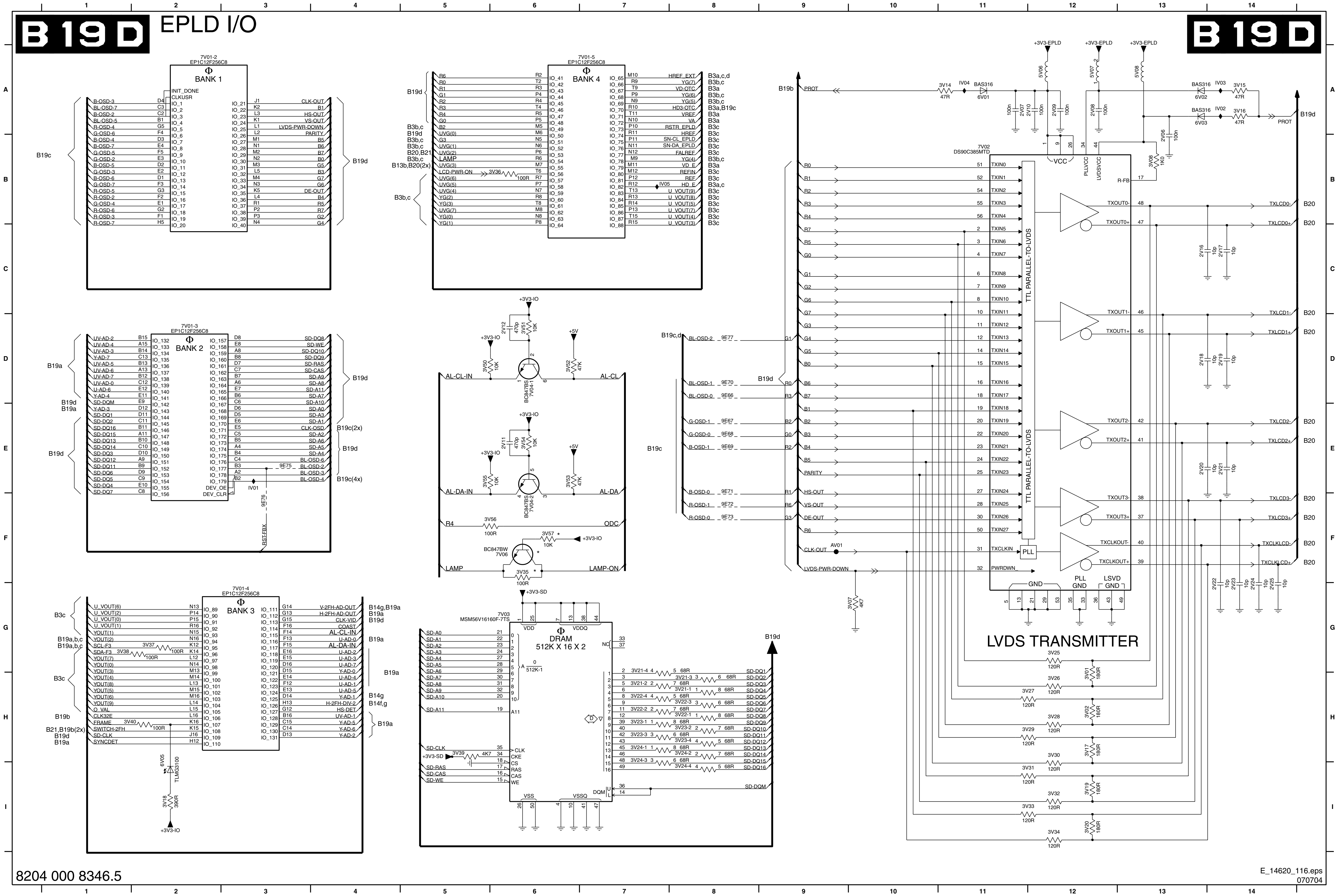
1E02	B8
1E04	G6
2D03	E5
2D04	F3
2D09	G3
2D10	G3
2D11	G3
2D12	G3
2D15	I5
2E01	G4
2E03	G4
2E06	G4
2E41	F5
2E42	F6
2E43	F4
2E49	E3
2E50	E3
2E51	E2
2E52	G8
2E54	G4
2E55	H4
2E56	H4
2E57	H4
2E58	H4
2E59	H4
2E62	H3
2E65	H3
2E66	H3
2E67	H3
2E68	I4
2E69	I4
2E70	I4
2E71	I3
2E72	I3
2E73	I3
2E74	I3
2E75	I3
2E77	I2
2E78	I2
2E79	F5
2E80	F5
2E81	I2
2E82	G3
2E83	G3
2E84	B1
2E86	E1
2E87	E6
2E88	A8
2E89	B8
2E90	B8
2E91	C8
2E92	B9
2E93	G12
2E94	E12
2E95	I12
2E96	B4
2E97	C4
2E98	C4
2E99	F6
3E00	B2
3E01	B4
3E02	C4
3E03	D4
3E50	B4
3E51	B4
3E52	B4
3E53	B7
3E54	G5
3E55	E2
3E56	E2
3E57	E2
3E58	G5
3E59	B3
3E60	A7
3E61	E6
3E62	D5
3E63	B7
3E64	B3
3E69	H8
3E70	H9
3E73	B6
3E74	I5
3E77	A8
3E78	A8
3E79	B8
3E80	C8
3E81	E12
3E82	F12
3E83	F11
3E84	G10
3E85	G12
3E86	G11
3E87	I11
3E88	H5
3E89	I5
5E50	H5
5E51	I5
5E52	G5
5E53	D5
5E54	F5
5E55	E11
5E56	H11
5E58	G8
6E51	E5
6E52	G5
6E53	G5
6E54	I4
6E55	H5
6E56	E12
7E01	E5
7E02	B2
7E03	F11
7E04	G11
7E05	D3
7E06	I11
7E10	H8
7E12-1	F3
7E12-2	E2
7E25	C3
7E26	B3
7E27	C3
7V01-1	B5
7V01-6	A12
9E57	I8
9E58	I8
9E59	E5
9E60	C7
9E61	D7
9E62	C7
9E63	C7
9E64	C7
9E65	D7
FE05	F5
FE50	I10
FE51	B8
FE52	B8
FE53	C7
FE54	C8
FE55	B8
FE56	D6
FE57	H4
FE58	I4
FE59	G3
FE60	F3
FE61	E3
FE66	B9
FE67	E2
IE20	B4
IE21	C3
IE22	B3
IE23	C4
IE24	C4
IE25	C3
IE26	E2
IE27	E2
IE29	G5
IE30	H5
IE31	I5
IE32	G5
IE33	E12
IE34	C3
IE35	C3
IE36	B3
IE37	E5

SSB: EPLD OSD


B19C
EPLD OSD
B19C
A/D CONVERTER
7E24
AD9283BRS-80
Φ
8-BIT
ADC
VD
VDD
GND
AIN+
AIN-
PWRDWN
ENCODE
VREFOUT
VREFIN
DATA
BL-OSD
3E37
100R
2E39
10p
BL-OSD-0
BL-OSD-1
BL-OSD-2
BL-OSD-3
BL-OSD-4
BL-OSD-5
BL-OSD-6
BL-OSD-7
VBL
3E05
1K5
3E04
1K0
3E90
68R
2E02
100n
2E04
100n
+3V3-AD
3E09
100R
IE04
3E10
33R
IE03
7E22
BC847BW
3E13
1K0
9E74
RES
3E15
100R
2E32
10p
CLK-BL
IE05
B3a
5E00
2E07
100n
2E09
100n
VBL
FL01
2E05
100n
5E01
2E10
2E11
2E12
2E13
2E14
2E15
IL01
VDO
5E02
2E16
2E17
2E18
2E19
IL02
VDDO
5E03
2E08
2E20
IL03
PVDO
7E23
AD9883AKST
VDDO
PVDO
VDO
PVDO
VDD
VD
PVD
R-OSD
3E06
100R
2E22
22p
2E21
47n
RAIN
CLAMP
A/D
8
G-OSD
3E07
100R
2E24
22p
2E23
47n
GAIN
B-OSD
3E08
100R
2E26
22p
2E25
47n
BAIN
2E27
100n
IL05
MIDSCV
ROUTA0
ROUTA1
ROUTA2
ROUTA3
ROUTA4
ROUTA5
ROUTA6
ROUTA7
R-OSD-0
R-OSD-1
R-OSD-2
R-OSD-3
R-OSD-4
R-OSD-5
R-OSD-6
R-OSD-7
GOUTA0
GOUTA1
GOUTA2
GOUTA3
GOUTA4
GOUTA5
GOUTA6
GOUTA7
G-OSD-0
G-OSD-1
G-OSD-2
G-OSD-3
G-OSD-4
G-OSD-5
G-OSD-6
G-OSD-7
BOUTA0
BOUTA1
BOUTA2
BOUTA3
BOUTA4
BOUTA5
BOUTA6
BOUTA7
B-OSD-0
B-OSD-1
B-OSD-2
B-OSD-3
B-OSD-4
B-OSD-5
B-OSD-6
B-OSD-7
B19d
B3a,B19d
HD3-OTC
VD-OTC
2E53
10p
FE01
3E11
470R
FE03
3E12
470R
2E48
10p
3E14
1K0
HSYNC
VSYNC
SOGIN
CLAMP
COAST
FILT
SYNC
PROCESSING
AND CLOCK
GENERATION
HSOUT
VSOUT
SOGOUT
DATACK
3E91
33R
AL10
CLK-OSD
CLK-BL
B19c,d
PVDO
2E28
47n
IE00
2E29
33n
3E16
2K7
IE01
2E30
4n7
2E34
3n3
3E18
100R
3E19
100R
SDA
SCL
A0
SERIAL REGISTER
AND
PWR MANAGMENT
REF
REF-BYPASS
FE04
2E35
100n
GND
SDA-F3
SCL-F3
B19a,b,d
8204 000 8346.5
E_14620_115.eps
070704

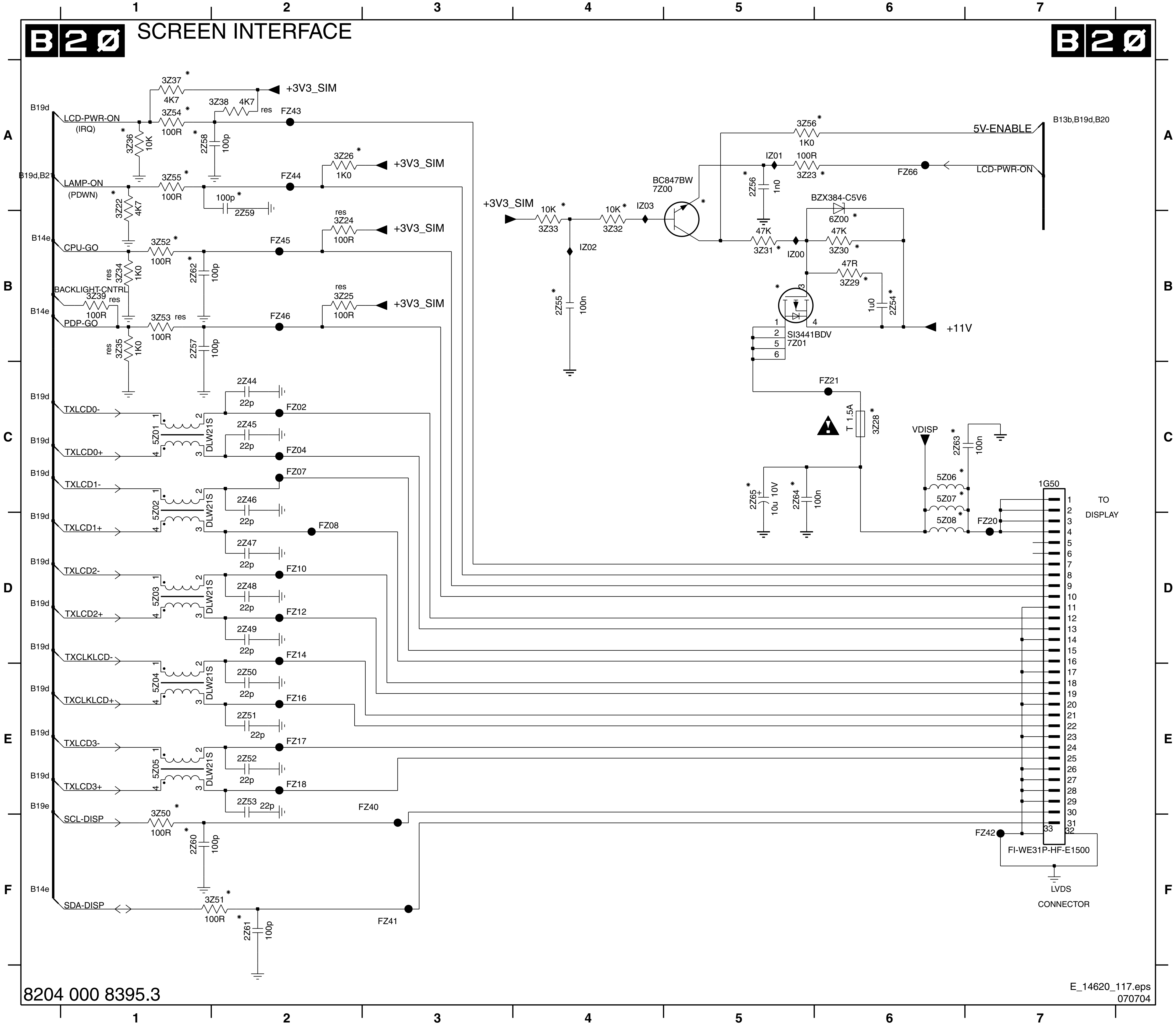
2E02	D1
2E04	D2
2E05	B4
2E07	A5
2E08	C5
2E09	A6
2E10	B5
2E11	B6
2E12	B6
2E13	B6
2E14	B6
2E15	B6
2E16	B5
2E17	B6
2E18	B6
2E19	B6
2E20	C6
2E21	D7
2E22	D7
2E23	E7
2E24	E7
2E25	F7
2E26	G7
2E27	G7
2E28	H4
2E29	H4
2E30	H4
2E32	F1
2E34	H4
2E35	I12
2E39	B1
2E48	H6
2E53	G6
3E04	D1
3E05	C1
3E06	D6
3E07	E6
3E08	F6
3E09	E1
3E10	E2
3E11	G6
3E12	G6
3E13	E1
3E14	G7
3E15	F1
3E16	H5
3E18	H7
3E19	I7
3E37	B1
3E90	D1
3E91	H12
5E00	A5
5E01	B5
5E02	B5
5E03	C5
7E22	E1
7E23	C8
7E24	B2
9E74	E2
AL10	H12
FE01	G6
FE03	G6
FE04	H12
FL01	B4
IE00	H4
IE01	H5
IE03	E1
IE04	E2
IE05	F2
IL01	A7
IL02	B7
IL03	C7
IL05	G8

SSB: EPLD I/O


B19D
EPLD I/O
7V01-2 EP1C12F256C8 BANK 1
7V01-3 EP1C12F256C8 BANK 2
7V01-4 EP1C12F256C8 BANK 3
7V01-5 EP1C12F256C8 BANK 4
7V02 DS90C385MTD
TTL PARALLEL-TO-LVDS
PLL
LVDS TRANSMITTER
7V03 MSM56V16160F-7TS
DRAM 512K X 16 X 2
BC847BS 7V04-1
BC847BS 7V04-2
BC847BW 7V06
AL-CL-IN
AL-CL
AL-DA-IN
AL-DA
ODC
LAMP
LAMP-ON
+3V3-IO
+3V3-EPLD
+3V3-SD
+5V
PROT
B19a
B19b
B19c
B19d
B20
8204 000 8346.5
E_14620_116.eps
070704

2V06	B13
2V07	A11
2V08	A12
2V09	A12
2V10	A12
2V11	E6
2V12	D6
2V16	C13
2V17	C14
2V18	D13
2V19	D14
2V20	E13
2V21	E14
2V22	G14
2V23	G14
2V24	G14
2V25	G14
3V01	H12
3V02	H12
3V07	G10
3V08	B13
3V14	A11
3V15	A14
3V16	A14
3V17	H12
3V18	I2
3V19	I12
3V20	I12
3V21-1	H8
3V21-2	H7
3V21-3	H8
3V21-4	G7
3V22-1	H8
3V22-2	H7
3V22-3	H8
3V22-4	H7
3V23-1	H7
3V23-2	H8
3V23-3	H7
3V23-4	H8
3V24-1	H7
3V24-2	H8
3V24-3	H7
3V24-4	I8
3V25	G12
3V26	H12
3V27	H12
3V28	H12
3V29	H12
3V30	H12
3V31	I12
3V32	I12
3V33	I12
3V34	I12
3V35	F6
3V36	B6
3V37	G2
3V38	G1
3V39	H5
3V40	H1
3V50	D5
3V51	D6
3V52	D6
3V53	E6
3V54	E6
3V55	E5
3V56	F6
3V57	F6
5V06	A12
5V07	A12
5V08	A13
6V01	A11
6V02	A13
6V03	A13
6V05	I2
7V01-2	A2
7V01-3	D2
7V01-4	G3
7V01-5	A7
7V02	B11
7V03	G6
7V04-1	D6
7V04-2	F6
7V06	F6
9E66	D8
9E67	E8
9E68	E8
9E69	E8
9E70	D8
9E71	E8
9E72	F8
9E73	F8
9E75	E3
9E76	F3
9E77	D8
AV01	F9
IV01	E3
IV02	A14
IV03	A14
IV04	A11
IV05	B7

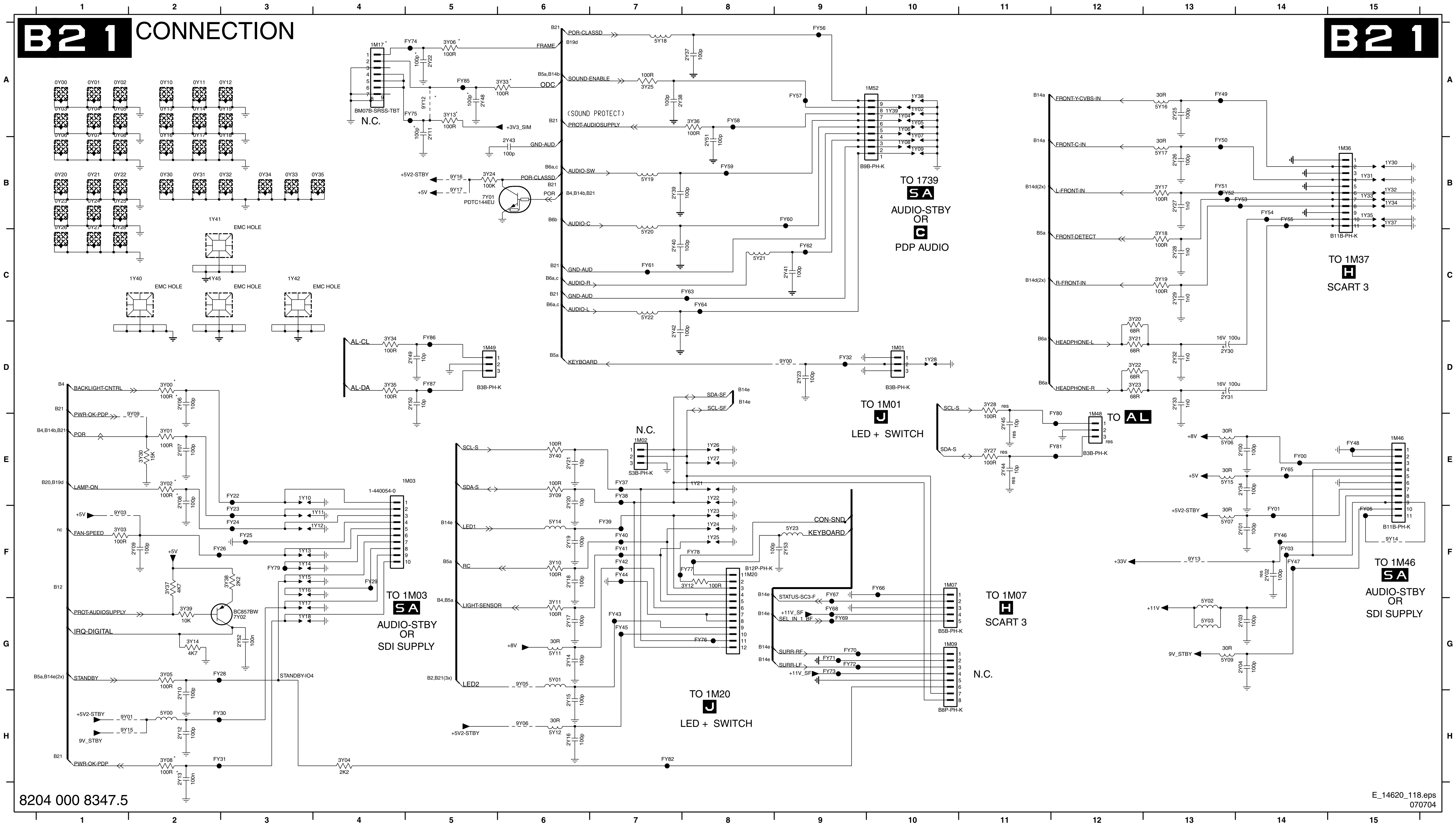
SSB: Screen Interface


B20 SCREEN INTERFACE
B20
1 2 3 4 5 6 7
A B C D E F
B19d LCD-PWR-ON (IRQ)
B19d,B21 LAMP-ON (PDWN)
B14e CPU-GO
BACKLIGHT-CNTRL
B14e PDP-GO
B19d TXLCD0-
B19d TXLCD0+
B19d TXLCD1-
B19d TXLCD1+
B19d TXLCD2-
B19d TXLCD2+
B19d TXCLKLCD-
B19d TXCLKLCD+
B19d TXLCD3-
B19d TXLCD3+
B19e SCL-DISP
B14e SDA-DISP
3Z37 4K7
3Z38 4K7 res
3Z54 100R
3Z36 10K
2Z58 100p
+3V3_SIM
FZ43
3Z26 1K0
FZ44
3Z55 100R
3Z22 4K7
100p 2Z59
3Z24 res 100R
3Z52 100R
3Z34 res 1K0
2Z62 100p
FZ45
3Z39 res 100R
3Z53 res 100R
3Z35 res 1K0
2Z57 100p
3Z25 res 100R
FZ46
2Z44 22p
2Z45 22p
2Z46 22p
2Z47 22p
2Z48 22p
2Z49 22p
2Z50 22p
2Z51 22p
2Z52 22p
2Z53 22p
5Z01 DLW21S
5Z02 DLW21S
5Z03 DLW21S
5Z04 DLW21S
5Z05 DLW21S
FZ02 FZ04 FZ07 FZ08 FZ10 FZ12 FZ14 FZ16 FZ17 FZ18
3Z50 100R
2Z60 100p
FZ40
3Z51 100R
2Z61 100p
FZ41
+3V3_SIM
10K 3Z33
10K 3Z32
IZ03
IZ02
2Z55 100n
BC847BW 7Z00
3Z56 1K0
5V-ENABLE
B13b,B19d,B20
IZ01
100R 3Z23
FZ66
LCD-PWR-ON
2Z56 1n0
BZX384-C5V6 6Z00
47K 3Z31
IZ00
47K 3Z30
47R 3Z29
1u0 2Z54
SI3441BDV 7Z01
+11V
FZ21
T 1.5A 3Z28
VDISP
2Z63 100n
5Z06 5Z07 5Z08
FZ20
2Z65 10u 10V
2Z64 100n
1G50
TO DISPLAY
FZ42
FI-WE31P-HF-E1500
LVDS CONNECTOR
8204 000 8395.3
E_14620_117.eps 070704

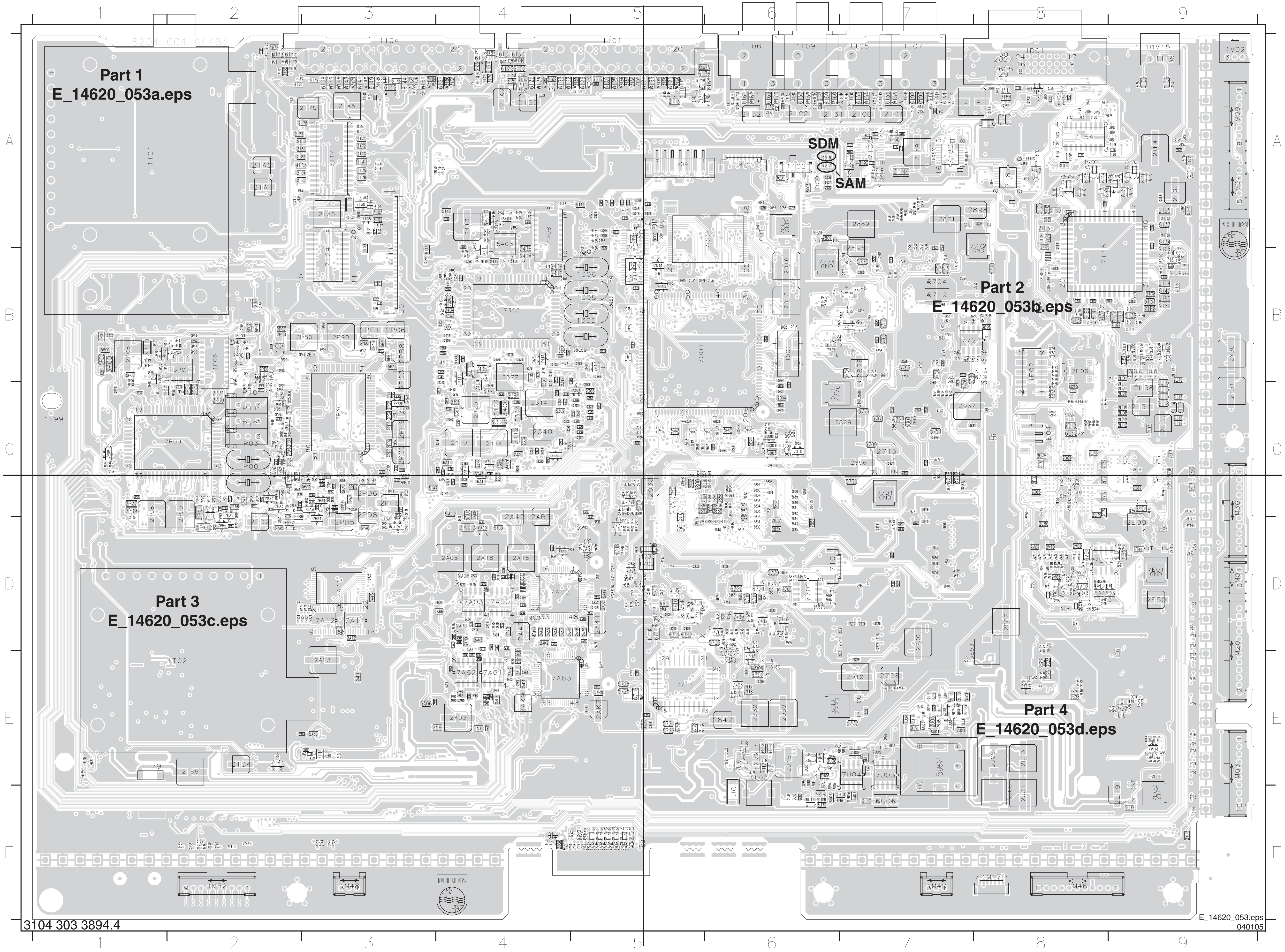
1G50	C7
2Z44	C2
2Z45	C2
2Z46	C2
2Z47	D2
2Z48	D2
2Z49	D2
2Z50	E2
2Z51	E2
2Z52	E2
2Z53	E2
2Z54	B6
2Z55	B4
2Z56	A5
2Z57	B1
2Z58	A1
2Z59	A2
2Z60	F1
2Z61	F2
2Z62	B1
2Z63	C6
2Z64	C5
2Z65	C5
3Z22	A1
3Z23	A5
3Z24	B2
3Z25	B2
3Z26	A2
3Z28	C6
3Z29	B6
3Z30	B6
3Z31	B5
3Z32	B4
3Z33	B4
3Z34	B1
3Z35	B1
3Z36	A1
3Z37	A1
3Z38	A2
3Z39	B1
3Z50	F1
3Z51	F2
3Z52	B1
3Z53	B1
3Z54	A1
3Z55	A1
3Z56	A5
5Z01	C1
5Z02	C1
5Z03	D1
5Z04	E1
5Z05	E1
5Z06	C6
5Z07	C6
5Z08	D6
6Z00	B6
7Z00	A4
7Z01	B5
FZ02	C2
FZ04	C2
FZ07	C2
FZ08	D2
FZ10	D2
FZ12	D2
FZ14	D2
FZ16	E2
FZ17	E2
FZ18	E2
FZ20	D7
FZ21	C6
FZ40	E3
FZ41	F3
FZ42	F7
FZ43	A2
FZ44	A2
FZ45	B2
FZ46	B2
FZ66	A6
IZ00	B5
IZ01	A5
IZ02	B4
IZ03	A4

SSB: Connection

0Y00 A1
0Y01 A1
0Y02 A1
0Y03 A1
0Y04 A1
0Y05 A1
0Y06 A1
0Y07 A1
0Y08 A1
0Y10 A2
0Y11 A2
0Y12 A3
0Y13 A2
0Y14 A2
0Y15 A3
0Y16 A2
0Y17 A2
0Y18 A3
0Y20 B1
0Y21 B1
0Y22 B1
0Y23 B1
0Y24 B1
0Y25 B1
0Y26 B1
0Y27 B1
0Y28 B1
0Y30 B2
0Y31 B2
0Y32 B3
0Y33 B3
0Y34 B3
0Y35 B4
1M01 D10
1M02 E7
1M03 E5
1M07 F10
1M09 G10
1M17 A4
1M20 F8
1M36 B15
1M46 E15
1M48 E12
1M49 D5
1M52 A10
1Y02 A10
1Y04 A10
1Y05 A10
1Y06 A10
1Y07 A10
1Y08 B10
1Y09 B10
1Y10 E3
1Y11 F4
1Y12 F4
1Y13 F3
1Y14 F3
1Y15 F3
1Y16 F3
1Y17 G3
1Y18 G3
1Y21 E8
1Y22 E8
1Y23 F8
1Y24 F8
1Y25 F8
1Y26 E8
1Y27 E8
1Y28 D10
1Y30 B15
1Y31 B15
1Y32 B15
1Y33 B15
1Y34 B15
1Y35 B15
1Y37 B15
1Y38 A10
1Y39 A10
1Y40 C2
1Y41 B2
1Y42 C3
1Y45 C2
2Y00 E14
2Y01 F14
2Y02 F14
2Y03 G14
2Y04 G14
2Y06 D2
2Y07 E2
2Y08 E2
2Y09 F2
2Y10 H2
2Y11 A5
2Y12 H2
2Y13 H2
2Y14 G6
2Y15 H6
2Y16 H6
2Y17 G6
2Y18 F6
2Y19 F6
2Y20 E6
2Y21 E6
2Y22 A5
2Y23 D9
2Y25 A13
2Y26 B13
2Y27 B13
2Y28 C13
2Y29 C13
2Y30 D13
2Y31 D13
2Y32 D13
2Y33 D13
2Y34 E14
2Y37 A8
2Y38 A7
2Y39 B7
2Y40 C7
2Y41 C9
2Y42 D7
2Y43 B6
2Y44 E11
2Y45 E11
2Y48 A5
2Y49 D5
2Y50 D5
2Y51 B8
2Y52 G3
2Y53 F9
3Y00 D2
3Y01 E2
3Y02 E2
3Y03 F1
3Y04 H4
3Y05 G2
3Y06 A5
3Y08 H2
3Y09 E6
3Y10 F6
3Y11 G6
3Y12 F8
3Y13 A5
3Y14 G2
3Y17 B13
3Y18 C13
3Y19 C13
3Y20 C12
3Y21 D12
3Y22 D12
3Y23 D12
3Y24 B5
3Y25 A7
3Y27 E11
3Y28 D11
3Y30 E2
3Y33 A6
3Y34 D4
3Y35 D4
3Y36 A8
3Y37 F2
3Y38 F3
3Y39 G2
3Y40 E6
5Y00 H2
5Y01 G6
5Y02 G13
5Y03 G13
5Y06 E13
5Y07 F13
5Y09 G13
5Y11 G6
5Y12 H6
5Y14 F6
5Y15 E13
5Y16 A13
5Y17 B13
5Y18 A7
5Y19 B7
5Y20 C7
5Y21 C8
5Y22 C7
5Y23 F9
7Y01 B5
7Y02 G3
9Y00 D9
9Y01 H1
9Y03 F1
9Y05 G6
9Y06 H6
9Y09 E2
9Y12 A5
9Y13 F13
9Y14 F15
9Y15 H1
9Y16 B5
9Y17 B5
FY00 E14
FY01 F14
FY03 F14
FY05 F15
FY22 E3
FY23 F3
FY24 F3
FY25 F3
FY26 F2
FY28 G2
FY29 F4
FY30 H2
FY31 H2
FY32 D9
FY37 E7
FY38 E7
FY39 F7
FY40 F7
FY41 F7
FY42 F7
FY43 G7
FY44 F7
FY45 G7
FY46 F14
FY47 F14
FY48 E15
FY49 A13
FY50 B13
FY51 B13
FY52 B13
FY53 B14
FY54 B14
FY55 B14
FY56 A9
FY57 A9
FY58 A8
FY59 B8
FY60 B9
FY61 C7
FY62 C9
FY63 C8
FY64 C8
FY65 E14
FY66 F10
FY67 F9
FY68 G9
FY69 G9
FY70 G9
FY71 G9
FY72 G9
FY73 G9
FY74 A5
FY75 A5
FY76 G8
FY77 F8
FY78 F8
FY79 F3
FY80 E12
FY81 E12
FY82 H7
FY85 A5
FY86 D5
FY87 D5


B21 CONNECTION
B21
1M17
BM07B-SRSS-TBT
N.C.
FRAME
ODC
+3V3_SIM
GND-AUD
POR-CLASSD
SOUND-ENABLE
(SOUND PROTECT)
PROT-AUDIOSUPPLY
AUDIO-SW
AUDIO-C
GND-AUD
AUDIO-R
GND-AUD
AUDIO-L
KEYBOARD
+5V2-STBY
+5V
7Y01
PDTC144EU
POR
EMC HOLE
1M52
B9B-PH-K
TO 1739
SA
AUDIO-STBY
OR
C
PDP AUDIO
AL-CL
AL-DA
1M49
B3B-PH-K
1M01
B3B-PH-K
TO 1M01
J
LED + SWITCH
FRONT-Y-CVBS-IN
FRONT-C-IN
L-FRONT-IN
FRONT-DETECT
R-FRONT-IN
HEADPHONE-L
HEADPHONE-R
1M36
B11B-PH-K
TO 1M37
H
SCART 3
SCL-S
SDA-S
1M48
B3B-PH-K
TO AL
1M46
B11B-PH-K
TO 1M46
SA
AUDIO-STBY
OR
SDI SUPPLY
+8V
+5V
+5V2-STBY
+33V
+11V
9V_STBY
BACKLIGHT-CNTRL
PWR-OK-PDP
POR
LAMP-ON
FAN-SPEED
PROT-AUDIOSUPPLY
IRQ-DIGITAL
STANDBY
STANDBY-IO4
9V_STBY
PWR-OK-PDP
7Y02
BC857BW
1M03
1-440054-0
TO 1M03
SA
AUDIO-STBY
OR
SDI SUPPLY
SCL-S
SDA-S
LED1
RC
LIGHT-SENSOR
LED2
N.C.
1M02
S3B-PH-K
SDA-SF
SCL-SF
CON-SND
KEYBOARD
1M20
B12P-PH-K
TO 1M20
J
LED + SWITCH
STATUS-SC3-F
+11V_SF
SEL_IN_1_SF
SURR-RF
SURR-LF
1M07
B5B-PH-K
TO 1M07
H
SCART 3
1M09
B8P-PH-K
N.C.
8204 000 8347.5
E_14620_118.eps
070704

Layout SSB (Top Side Overview)


1
2
3
4
5
6
7
8
9
A
B
C
D
E
F
Part 1
E_14620_053a.eps
SDM
SAM
Part 2
E_14620_053b.eps
Part 3
E_14620_053c.eps
Part 4
E_14620_053d.eps
PHILIPS
3104 303 3894.4
E_14620_053.eps
040105

Layout SSB Mapping (Top Side)

1000	A6
1001	B6
1304	A5
1305	B5
1306	B4
1307	B5
1308	B4
1401	A6
1402	A6
1408	A4
1702	D5
1703	D5
1710	D7
1D01	A8
1E02	B8
1E04	C8
1I01	A5
1I04	A4
1I05	A7
1I06	A6
1I07	A7
1I09	A6
1I11	A3
1I53	A8
1I56	A9
1I57	A8
1I59	A9
1I79	E1
1M01	D9
1M02	A9
1M03	E9
1M07	A9
1M09	A9
1M15	A9
1M17	F8
1M20	D9
1M36	C9
1M46	F8
1M48	F3
1M49	F7
1M52	F2
1P00	C2
1P03	C2
1P06	B2
1P10	C2
1P11	C2
1P12	C2
1T01	A2
1T02	E2
1U01	F6
2002	B6
2004	C6
2005	C6
2006	C6
2007	C6
2008	C6
2009	C5
2011	C5
2012	C5
2013	B6
2014	B6
2016	B6
2018	B6
2020	C6
2025	B5
2027	C5
2028	B6
2029	C6
2031	A6
2034	B5
2035	B5
2037	B6
2039	B5
2058	A6
2059	A6
2067	B5
2070	C6
2071	C6
2073	C6
2075	A6
2301	C4
2305	B4
2314	C4
2315	C4
2316	B4
2317	B4
2318	B4
2322	B4
2324	C4
2327	B5
2329	C5
2330	C5
2331	C5
2332	C4
2333	C4
2334	C4
2336	C4
2339	A5
2340	C4
2344	A5
2347	A5
2348	A5
2349	A5
2350	B4
2351	B4
2352	B4
2353	B4
2355	A5
2356	B4
2357	B4
2358	B4
2359	B5
2360	B5
2361	B5
2362	B5
2363	C5
2364	A5
2365	B4
2367	B4
2368	B4
2373	B4
2376	B4
2377	C4
2379	B5
2380	B5
2381	B5
2382	B5
2383	A5
2388	B4
2389	C4
2391	A4
2393	C4
2394	C4
2395	C5
2396	C5
2397	C4
2398	C4
2401	B4
2403	B4
2404	B4
2405	A4
2406	A4
2407	A4
2408	A4
2409	B4
2410	C4
2411	B4
2412	A4
2413	A4
2414	C4
2416	B4
2417	B4
2425	C4
2427	A5
2428	A5
2429	C4
2432	B4
2433	C4
2434	B4
2435	B4
2436	B4
2707	D6
2708	D6
2709	E6
2710	D7
2711	D7
2712	D7
2715	C7
2716	E7
2717	D7
2718	C5
2719	C5
2720	D5
2721	D5
2722	D5
2723	D7
2724	C8
2725	E7
2726	E6
2728	E7
2729	E7
2730	D7
2732	E5
2733	D6
2735	D5
2736	D6
2738	D7
2739	E6
2740	D5
2741	D5
2742	D5
2743	D6
2744	D6
2745	E5
2747	D5
2749	D5
2750	A7
2751	A7
2752	B7
2753	B7
2755	B8
2756	B7
2758	B7
2759	B7
2760	B7
2761	B7
2762	B7
2763	B7
2764	C7
2765	B8
2768	A7
2770	B7
2771	B7
2772	B7
2773	B7
2777	B7
2778	B7
2780	B7
2781	B7
2782	B7
2784	B7
2785	B7
2787	B7
2788	B7
2790	B7
2792	C5
2794	B7
2795	B7
2796	B7
2797	B7
2798	B7
2799	B7
2800	D5
2802	A6
2805	B7
2809	A7
2810	C7
2811	C7
2813	C7
2814	B8
2815	B7
2816	B7
2818	B7
2819	D6
2820	C7
2821	B7
2822	B6
2824	B7
2826	B7
2828	B7
2829	C7
2830	C7
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2832	C7
2833	C7
2834	C7
2835	C7
2836	C5
2837	A7
2838	A7
2839	A7
2840	C5
2841	C6
2843	E5
2844	B7
2845	D6
2846	D6
2847	E6
2848	E5
2849	B7
2850	C6
2851	C6
2852	D6
2853	D6
2854	D6
2855	C6
2856	C6
2857	C6
2858	C6
2859	C6
2860	C6
2861	C6
2862	C5
2863	C5
2864	C5
2865	C6
2866	D5
2867	D6
2868	C5
2869	C6
2870	D5
2871	A7
2872	B7
2873	B7
2874	D6
2875	D7
2876	C7
2877	D7
2878	D7
2879	D7
2880	D7
2881	D5
2886	D7
2887	D7
2888	D7
2889	A7
2890	D5
2891	E6
2895	A7
2896	C6
2897	C7
2898	A8
2899	A8
2900	C5
2901	D5
2902	D5
2914	D6
2915	C5
2916	D5
2917	E6
2918	E6
2919	E7
2921	B7
2922	E5
2923	E5
2924	A6
2925	B7
2926	A7
2927	A7
2928	A7
2929	D5
2931	D5
2935	D5
2936	C7
2937	C7
2938	C5
2939	E6
2A00	E4
2A02	D5
2A03	E4
2A04	E4
2A05	D4
2A06	D4
2A08	C4
2A09	D5
2A10	D4
2A11	D4
2A12	D3
2A13	D3
2A14	D4
2A15	D4
2A16	D4
2A17	D4
2A18	D4
2A20	D4
2A21	D4
2A22	D4
2A23	D4
2A25	D4
2A26	D4
2A27	D4
2A29	D5
2A30	D4
2A31	D4
2A32	D5
2A33	D5
2A35	D4
2A36	D4
2A37	D5
2A39	D5
2A40	D5
2A41	D5
2A42	D4
2A43	D4
2A44	D4
2A45	D3
2A46	D5
2A49	D4
2A50	D4
2A53	D4
2A54	D4
2A56	D4
2A59	D4
2A62	D4
2A66	D4
2A76	D4
2A95	E3
2AA6	D5
2AA7	D4
2AB2	D4
2AB5	D4
2AB6	D4
2AB7	D4
2AD1	E3
2AF3	E3
2AF4	E3
2AK0	E5
2AK1	E5
2AK2	D4
2AK3	D4
2AK4	E4
2AK5	E4
2AK6	E5
2AK7	E5
2AK9	E4
2AL0	D4
2AL1	E4
2AL2	E4
2AL3	E4
2AL4	D4
2AL8	E4
2AL9	E4
2ALA	E4
2AM0	D4
2AM1	D4
2AM2	E4
2AM3	E4
2AM5	D4
2AM6	E4
2AM7	E4
2AM9	E4
2AN0	D4
2AN1	E4
2AN7	E5
2C01	A5
2D03	E7
2D09	C8
2D10	C8
2D11	C8
2D12	C8
2E01	C9
2E03	D9
2E06	C9
2E17	E9
2E21	D8
2E22	D8
2E23	E8
2E24	E8
2E25	E8
2E26	E8
2E28	E8
2E29	E8
2E30	E8
2E32	E9
2E34	E8
2E39	E9
2E41	D9
2E42	C8
2E43	D9
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5A02	C4
5A03	C4
5A06	E3
5A19	D5
5A38	E3
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5E56	C8
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5I06	A9
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5I32	B9
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5L13	C9
5L14	C9
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5P02	B2
5P03	B1
5P04	B2
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5Z02	F5
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6711	D5
6712	E6
6716	E5
6717	C7
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6I18	A8
6I19	A8
6I20	A8
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6I41	A3
6I42	A3
6I43	A4
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6U04	E7
6U05	E7
6U06	F7
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7I81	A8
7I82	A8
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7PB2	C2
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9409	B4
9412	A4
9414	B4
9416	A4
9417	A4
9419	B4
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9817	D6
9818	D6
9821	B8
9822	B8
9825	D5
9826	C5
9827	D5
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9A05	D5
9A06	D5
9A19	E4
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9A22	D3
9A23	D3
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9A65	D4
9A67	D4
9A71	D4
9A72	D2
9A73	D2
9A74	D3
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9E60	C8
9E61	C8
9E62	C8
9E63	C8
9E64	C8
9E65	C8
9E74	E9
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9I07	B9
9I08	B3
9I10	B3
9I12	B3
9I13	A6
9I14	B9
9I17	A5
9I18	A5
9I20	A3
9I21	A3
9I22	A4
9I23	A8
9I25	A7
9I26	A7
9I27	A7
9I28	A9
9I30	A2
9I35	A2
9I37	A7
9I45	A8
9I49	A8
9I51	A6
9I59	A7
9I60	A3
9I61	A7
9I84	A8
9I85	B8
9I87	E1
9I89	E1
9I90	E1
9I95	B3
9I97	B3
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9P00	B1
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9P06	C1
9P08	B1
9P13	C2
9P14	B1
9P15	C1
9P19	B1
9P26	C2
9P27	C2
9P29	B2
9P70	B3
9P72	B2
9PA0	C3
9PA1	C2
9PA2	C3
9PA3	C2
9PA4	D3
9PA5	C3
9PA6	C3
9PA7	C2
9PA8	C2
9PB1	C2
9PB2	B3
9PB3	C2
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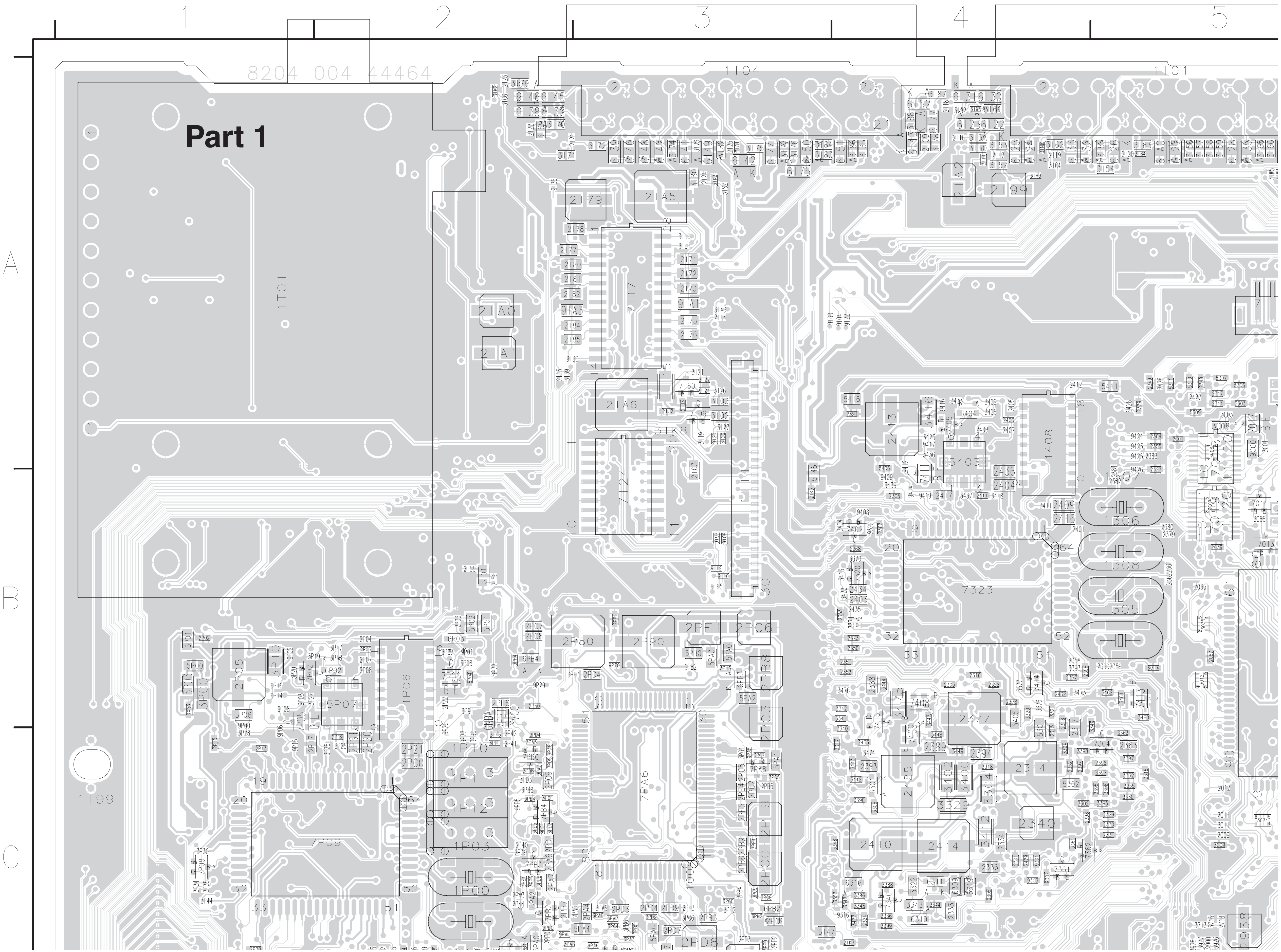
9PB5	C2
9PB8	D3
9Y01	F9

E_14620_053m.eps
270504

Layout SSB (Top Side Part 1)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5
A
B
C
Part 1
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1T01
1104
1101
7117
7124
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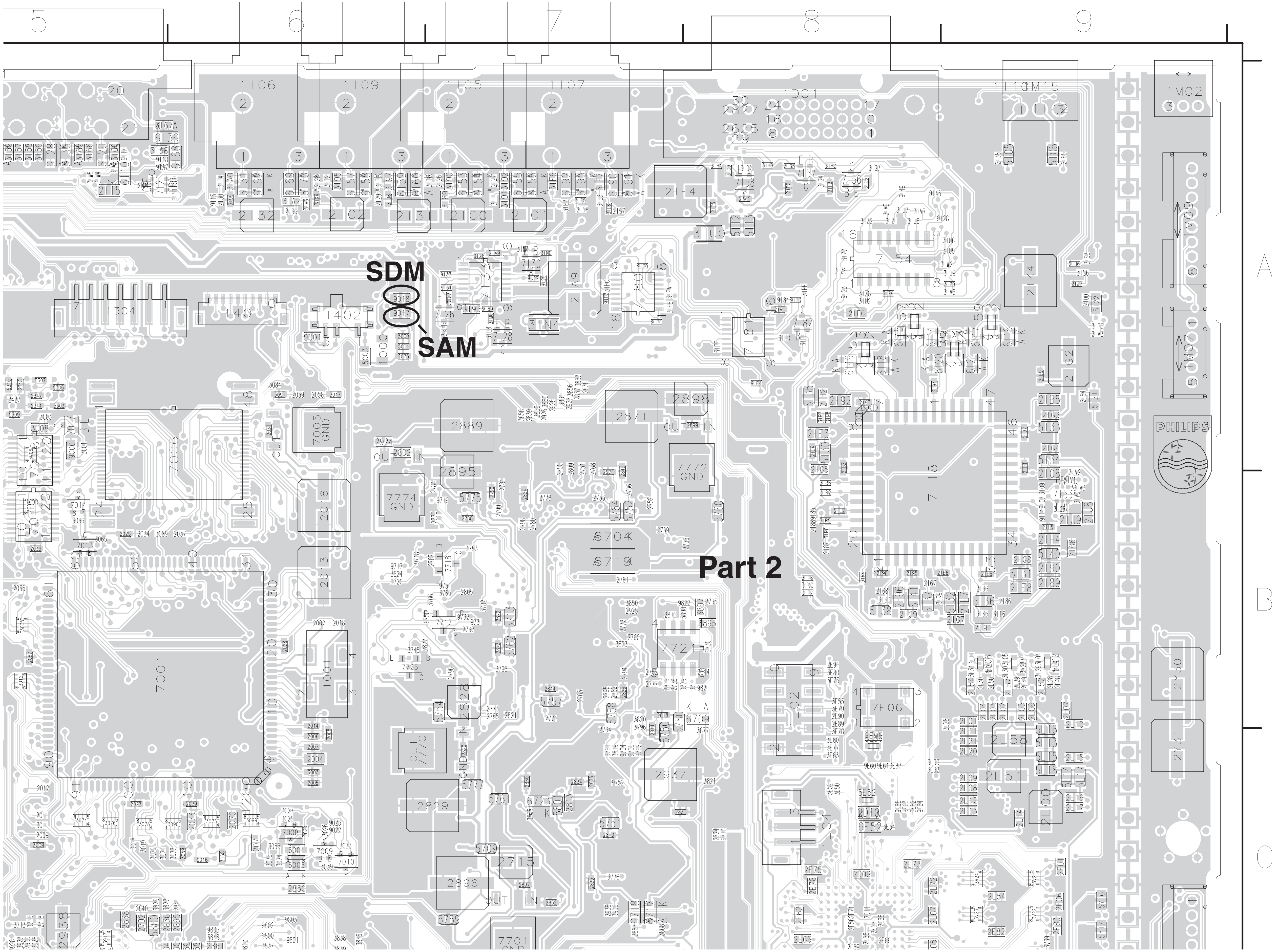
7P09
7PA6
1199
1408
5403
1306
1308
1305
2377
2314
2340
2410
2414

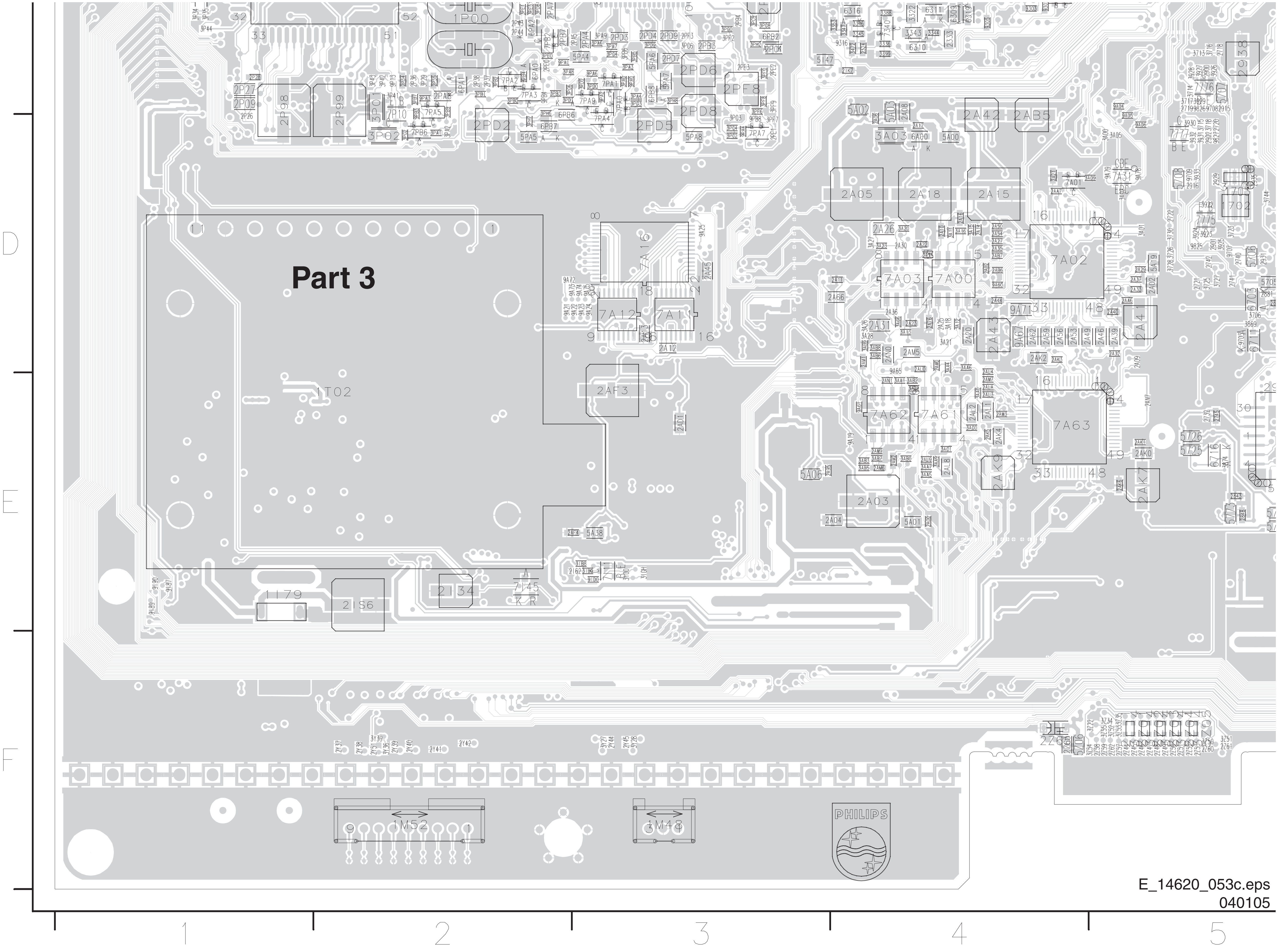
E_14620_053a.eps
040105

Layout SSB (Top Side Part 2)


5
6
7
8
9
A
B
C
SDM
SAM
Part 2
PHILIPS
7001
7006
7118
1304
1401
1402
1D01
1E02
1E04
7154
7E06

E_14620_053b.eps
040105

Layout SSB (Top Side Part 3)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2P98
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3P01
3P02
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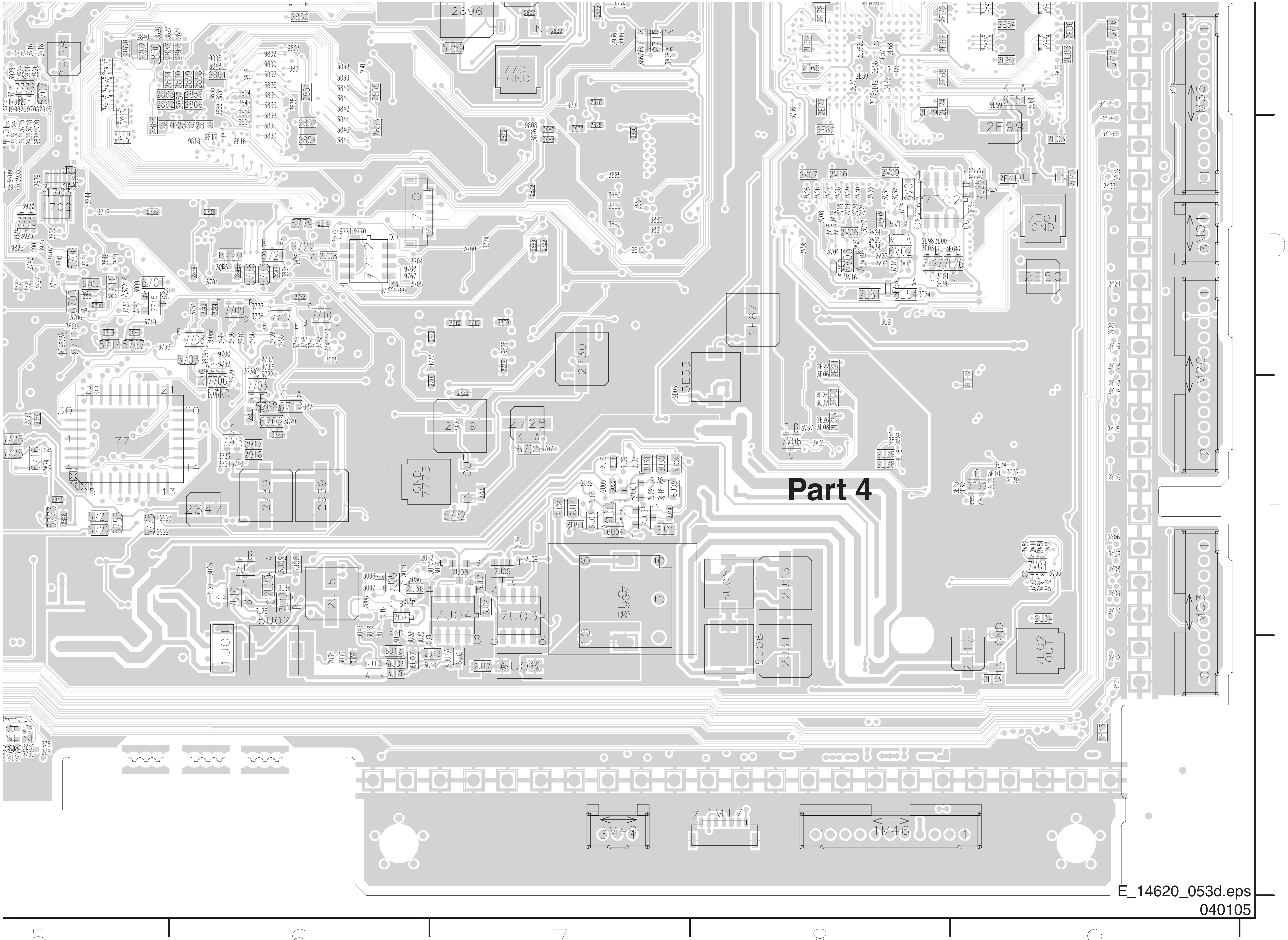
7A12
7A13
2A12
2AF3
2A05
2A18
2A15
2A26
7A03
7A00
7A02
2A42
2AB5
3A03
5A02
2A31
2A41
2A43
7A62
7A61
7A63
2AK9
2AK7
2A03
5A06
5A38
1179
2IS6
2134
7145
1M52
1M48
PHILIPS
D
E
F
1
2
3
4
5

E_14620_053c.eps
040105

Layout SSB (Top Side Part 4)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F
5
6
7
8
9
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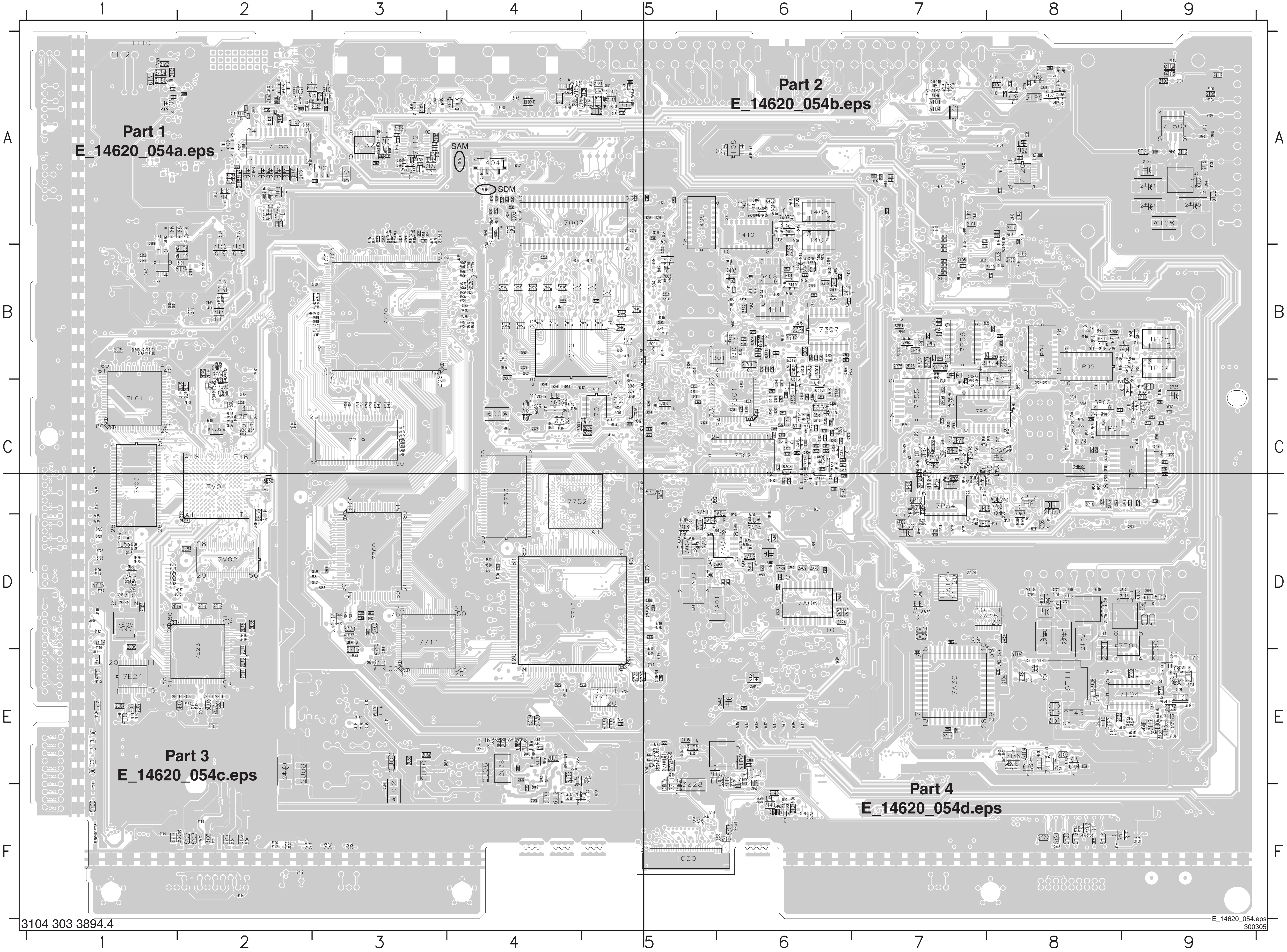
040105

Layout SSB (Bottom Side Overview)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Part 2
E_14620_054b.eps
Part 3
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Part 4
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SAM
SDM
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A B C D E F
7007
7012
7720
7719
7L01
7V01
7V02
7V03
7E23
7E24
7E05
7753
7752
7760
7713
7714
7301
7302
7307
7A06
7A30
7P51
7P55
7P56
7T01
7T04
7T50
1G50
3104 303 3894.4
E_14620_054.eps
300305

Layout SSB Mapping (Bottom Side)

1301	B5	2812	B3	2I59	E8	2PF7	C8	3031	B5	3441	B6	3C12	B5	3IH1	A5	3P66	B8	3V18	C2	5Y15	F2	7712	E5	9015	C5	9I65	A3
1404	A4	2817	D3	2I60	F6	2PG2	C9	3032	C4	3445	A6	3E04	E1	3IH2	F6	3P67	B7	3V37	C2	5Y18	F8	7713	D4	9019	C4	9I66	A3
1406	A6	2823	A3	2I69	B2	2PG6	D7	3034	B4	3450	B6	3E05	E1	3IH4	F6	3P68	B7	3V38	C2	5Y19	F8	7714	D3	9021	C4	9I67	A3
1407	A6	2825	A3	2I70	B2	2T01	A9	3036	C4	3451	B6	3E11	E2	3IH7	A3	3P69	B7	3V40	C2	5Y20	F8	7719	C3	9024	C4	9I68	A2
1409	A5	2827	A3	2IA4	A5	2T02	D9	3037	C4	3452	B6	3E12	E2	3IH8	A8	3P70	B7	3Y00	E1	5Y21	F8	7720	B3	9025	C4	9I78	B8
1410	B6	2882	D3	2IB7	E6	2T03	D8	3038	C4	3453	C6	3E14	E2	3IHG	A7	3P71	C8	3Y01	E1	5Y22	F8	7752	C5	9308	C6	9I79	A3
1411	B6	2883	D3	2IB8	A1	2T04	A9	3040	B5	3454	C6	3E18	D2	3II0	A8	3P72	B8	3Y02	E1	5Y23	D1	7753	C4	9309	C6	9I81	A2
1A00	D5	2884	D3	2IB9	B2	2T05	A9	3041	B5	3455	C6	3E19	D2	3II1	A8	3P74	B7	3Y03	E1	5Z07	F6	7760	D3	9310	C6	9I88	A2
1A01	D5	2885	D3	2IC3	A3	2T06	A9	3042	C5	3456	B6	3E51	D1	3II2	A8	3P75	D7	3Y05	E1	5Z08	F6	7A04	D6	9311	C6	9I91	A2
1G50	F5	2892	E3	2IC5	B1	2T07	D8	3045	A4	3457	B6	3E55	D1	3II3	A8	3P76	C7	3Y06	F2	6002	A4	7A06	D6	9312	C6	9I92	A7
1P04	B8	2893	D3	2IC6	A2	2T09	A9	3046	A4	3459	C6	3E56	D1	3II5	A2	3P79	C8	3Y08	F1	6004	C4	7A07	D6	9313	C6	9I93	A7
1P05	C8	2894	D3	2IC7	A2	2T10	D9	3048	B5	3463	B6	3E57	D1	3II6	A2	3P80	C8	3Y09	D1	6005	A4	7A08	D5	9318	B6	9I94	A7
1P07	C8	2920	D5	2IE0	B8	2T11	D8	3049	B5	3465	C6	3E58	D1	3II7	A2	3P81	C7	3Y10	D1	6006	C4	7A09	D5	9319	B6	9I96	B8
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1P09	C9	2933	C5	2IF8	A2	2T13	A9	3051	B5	3468	B6	3E70	C2	3II9	B2	3P85	B8	3Y12	D1	6304	B6	7A14	D7	9402	A6	9I99	F6
1P50	C8	2A01	D6	2IF9	A2	2T14	D8	3052	B4	3470	C6	3E81	C2	3IJ2	A2	3P86	B7	3Y13	F2	6306	B6	7A15	D8	9403	A6	9IA2	A3
2003	B4	2A07	C6	2IG1	A8	2T15	A9	3053	C5	3471	C6	3E82	B2	3IJ3	A2	3P87	B7	3Y14	F8	6307	B6	7A30	E7	9404	B6	9IA4	A5
2010	C5	2A19	D7	2IH1	B1	2T16	D9	3054	B4	3700	D4	3E83	C2	3IJ4	A2	3P88	B7	3Y20	D1	6308	C6	7E03	B2	9405	A6	9IA5	A5
2017	B5	2A24	D7	2IH3	A5	2T17	A9	3055	B4	3702	E4	3E84	B2	3IJ6	A2	3P92	C8	3Y21	D1	6312	B6	7E04	C2	9406	B6	9IB1	A7
2019	A5	2A34	D8	2IH6	A2	2T18	D8	3056	B4	3709	E5	3E85	B2	3IJ7	A2	3P94	C8	3Y22	D1	6313	B6	7E05	D1	9407	B6	9IB2	A7
2022	C4	2A38	D7	2IH7	A2	2T19	D8	3057	B4	3710	D5	3E86	B2	3IJ8	A7	3P95	C8	3Y23	D1	6314	C6	7E10	C2	9410	B6	9IB3	A2
2023	B4	2A47	D5	2IH8	A2	2T20	D8	3061	B4	3711	E4	3E88	D2	3IK4	A7	3P96	C7	3Y24	F8	6317	C6	7E12	D1	9413	B6	9ID1	A3
2024	B4	2A51	C5	2IH9	A2	2T21	A9	3062	B4	3757	A3	3E89	D1	3IK5	A8	3P97	D7	3Y25	F8	6334	B6	7E23	E2	9415	B6	9ID2	A3
2026	B5	2A64	D6	2IJ0	A8	2T22	A9	3064	C5	3758	E5	3E90	E1	3IK7	A7	3P98	C7	3Y30	F1	6402	A6	7E24	E1	9418	A6	9ID3	A2
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2040	B4	2A74	D6	2IK1	A2	2T33	E8	3072	B4	3763	C3	3I04	A7	3IN3	A3	3PD7	C8	3Y37	F8	6714	D3	7I04	A4	9427	B6	9ID7	A2
2041	B5	2A75	D6	2IK2	A1	2T34	E8	3079	C5	3764	C3	3I05	B7	3IN8	A3	3PF5	B7	3Y38	F8	6715	E3	7I05	A5	9701	E5	9ID8	A2
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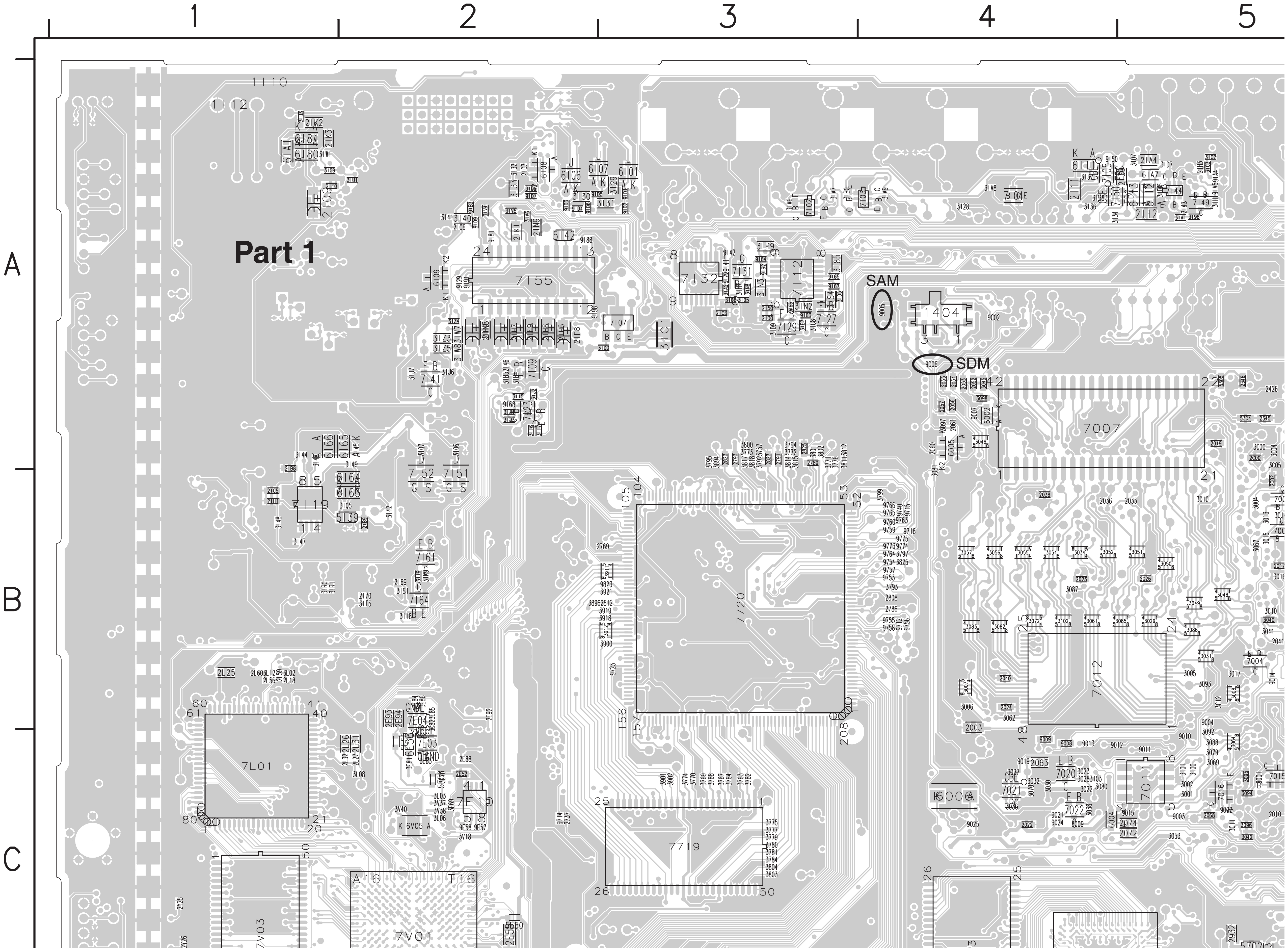
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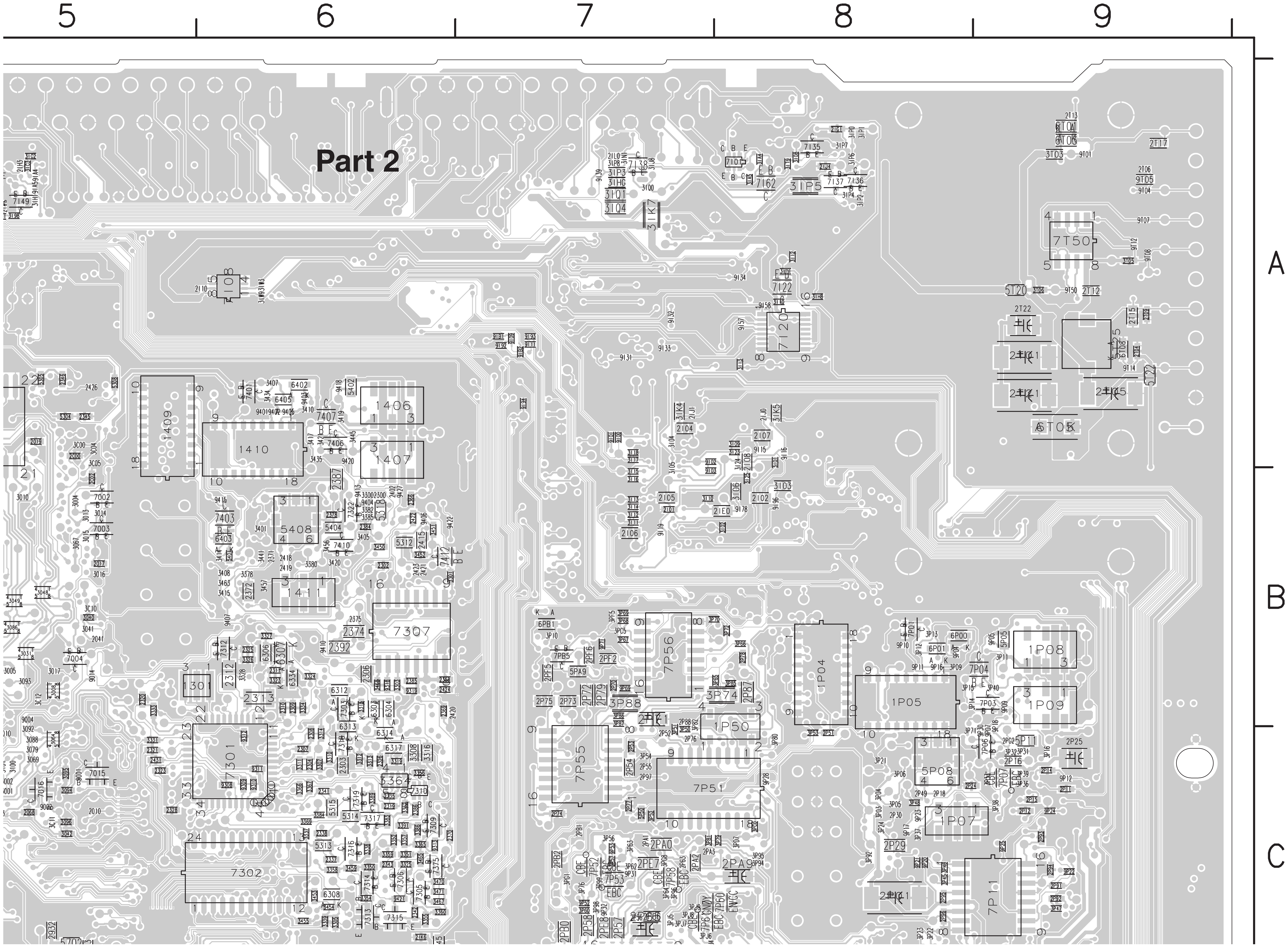
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1409
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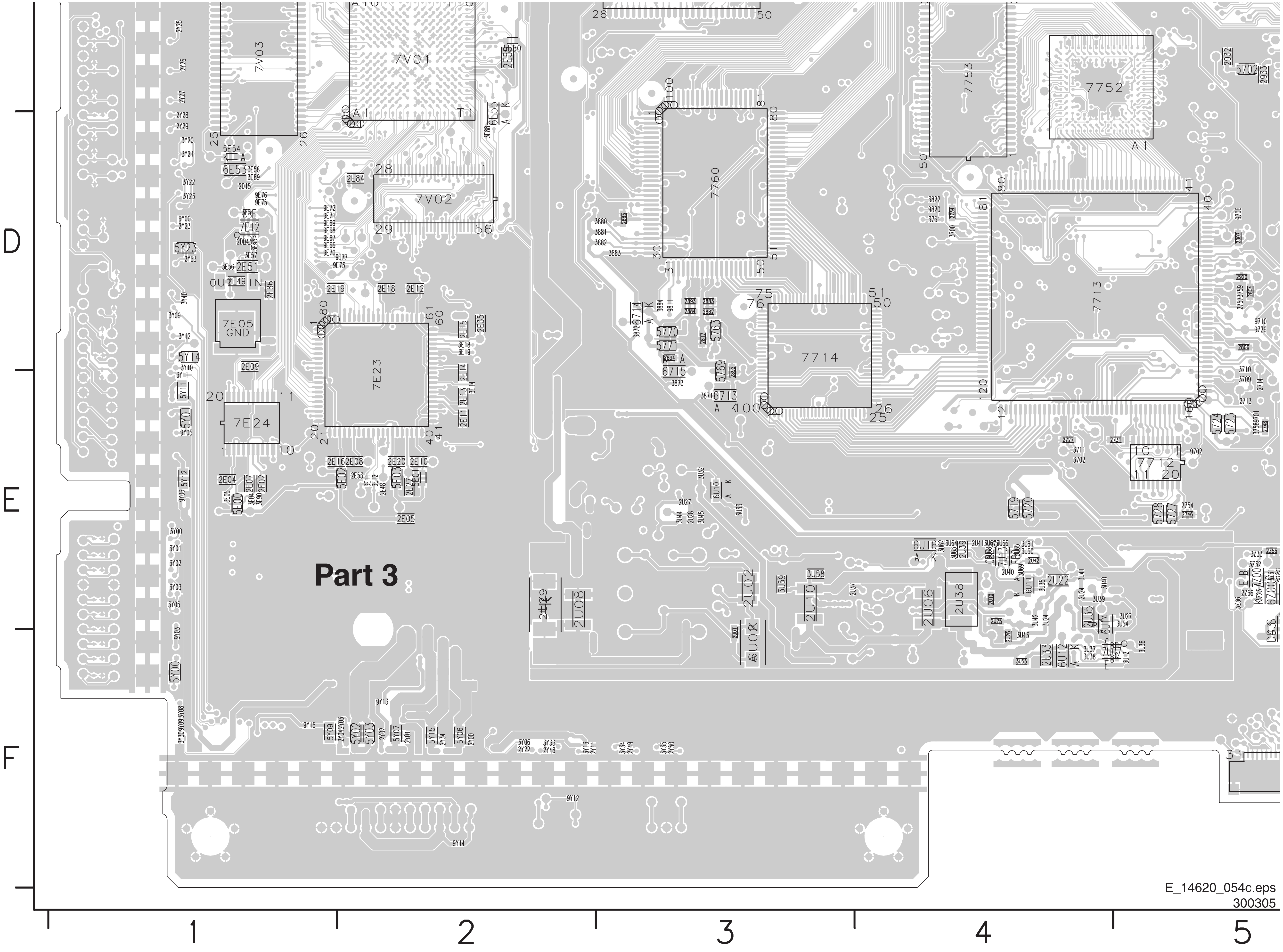
1411
1301
7307
7301
7302
5408
7P56
7P55
7P51
1P04
1P05
1P08
1P09
1P50
1P07
5P08
7P11
7T50
7120
6T05

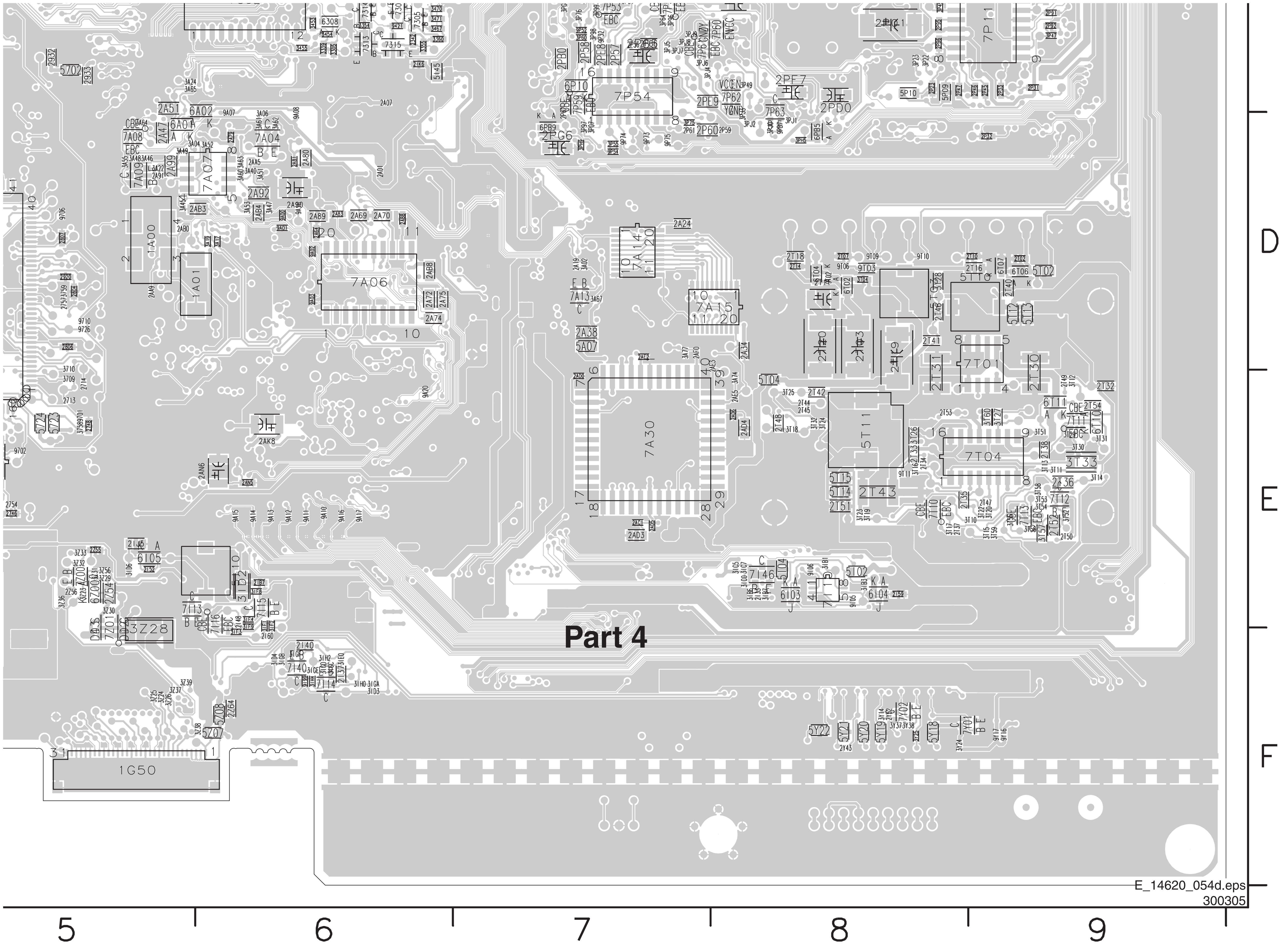
E_14620_054b.eps
300305

Layout SSB (Bottom Side Part 3)


Part 3
7V01
7V02
7V03
7E23
7E24
7E05
GND
7760
7714
7713
7753
7752
7712
D
E
F
1
2
3
4
5

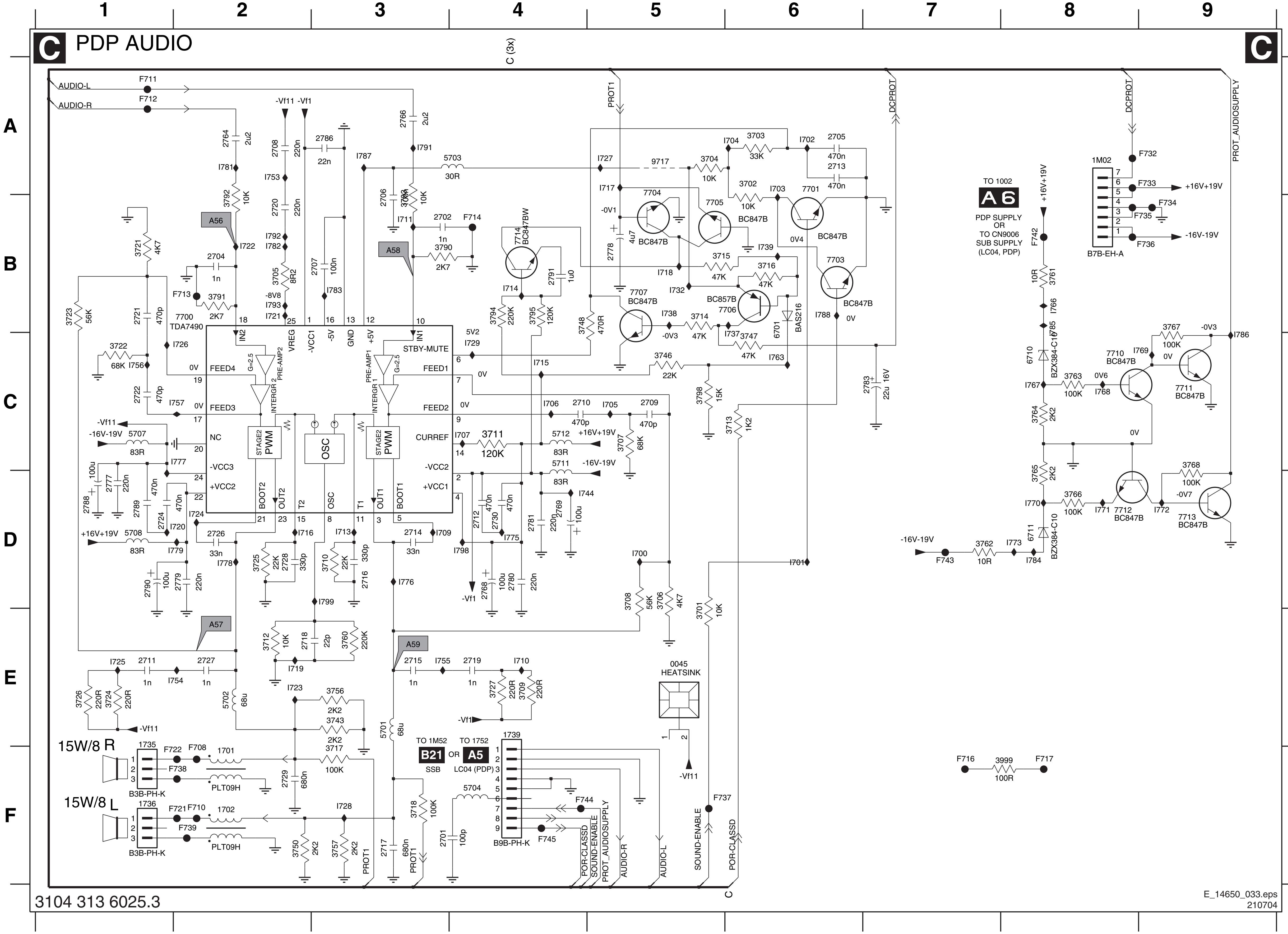
E_14620_054c.eps
300305

Layout SSB (Bottom Side Part 4)


Part 4
D
E
F
5
6
7
8
9
7A30
7A06
7A07
1A00
1A01
7P54
7A14
7A15
7T01
7T04
5T11
2T43
1G50
3Z28
6105
7A04
7A13
7T12
7146
7140
7114

E_14620_054d.eps
300305

PDP Audio

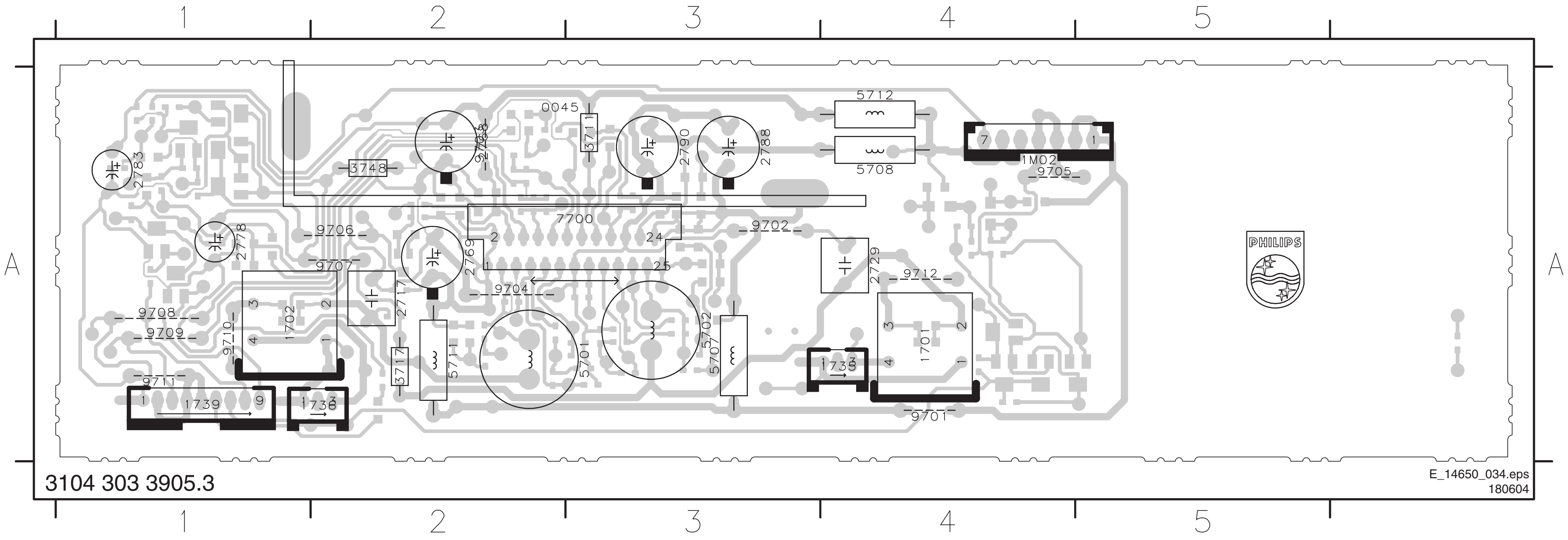


C PDP AUDIO
C (3x)
AUDIO-L
AUDIO-R
F711
F712
7700
TDA7490
IN2
IN1
VREG
-VCC1
-5V
GND
+5V
STBY-MUTE
FEED4
FEED3
FEED1
FEED2
NC
-VCC3
+VCC2
CURREF
-VCC2
+VCC1
BOOT2
OUT2
T2
OSC
T1
OUT1
BOOT1
PRE-AMP2
PRE-AMP1
INTERGR 2
INTERGR 1
STAGE2 PWM
OSC
G=2.5
PROT1
DCPROT
PROT_AUDIOSUPPLY
A56
A57
A58
A59
TO 1002
A6
PDP SUPPLY OR TO CN9006 SUB SUPPLY (LC04, PDP)
1M02
B7B-EH-A
+16V+19V
-16V-19V
7701 BC847B
7703 BC847B
7704 BC847B
7705 BC847B
7706 BC857B
7707 BC847B
7714 BC847BW
7710 BC847B
7711 BC847B
7712 BC847B
7713 BC847B
6701 BAS216
6710 BZX384-C10
6711 BZX384-C10
0045 HEATSINK
15W/8 R
15W/8 L
1735 B3B-PH-K
1736 B3B-PH-K
1701 PLT09H
1702 PLT09H
TO 1M52 B21 SSB
OR
TO 1752 A5 LC04 (PDP)
1739 B9B-PH-K
POR-CLASSD
SOUND-ENABLE
PROT_AUDIOSUPPLY
AUDIO-R
AUDIO-L
F716 3999 100R F717
1 2 3 4 5 6 7 8 9
A B C D E F
3104 313 6025.3
E_14650_033.eps
210704

0045	E5	3763	C8	I725	E1
1701	F2	3764	C8	I726	C2
1702	F2	3765	D8	I727	A5
1735	F1	3766	D8	I728	F3
1736	F1	3767	B9	I729	C4
1739	E4	3768	C9	I732	B5
1M02	A8	3790	B3	I737	C6
2701	F3	3791	B2	I738	B5
2702	B3	3792	B2	I739	B6
2704	B2	3793	B3	I744	D4
2705	A6	3794	B4	I753	A2
2706	B3	3795	B4	I754	E2
2707	B3	3798	C5	I755	E3
2708	A2	3999	F8	I756	C1
2709	C5	5701	E3	I757	C2
2710	C4	5702	E2	I763	C6
2711	E1	5703	A4	I766	B8
2712	D4	5704	F4	I767	C8
2713	A6	5707	C1	I768	C8
2714	D3	5708	D1	I769	C9
2715	E3	5711	C4	I770	D8
2716	D3	5712	C4	I771	D8
2717	F3	6701	B6	I772	D9
2718	E2	6710	C8	I773	D8
2719	E4	6711	D8	I775	D4
2720	B2	7700	B2	I776	D3
2721	B1	7701	A6	I777	C2
2722	C1	7703	B6	I778	D2
2724	D1	7704	A5	I779	D2
2726	D2	7705	B5	I781	A2
2727	E2	7706	B6	I782	B2
2728	D2	7707	B5	I783	B3
2729	F2	7710	C8	I784	D8
2730	D4	7711	C9	I785	B8
2764	A2	7712	D8	I786	C9
2766	A3	7713	D9	I787	A3
2768	D4	7714	B4	I788	B6
2769	D4	9717	A5	I791	A3
2777	D1	F708	E2	I792	B2
2778	B5	F710	F2	I793	B2
2779	D2	F711	A1	I798	D4
2780	D4	F712	A1	I799	D3
2781	D4	F713	B2		
2783	C7	F714	B4		
2786	A3	F716	F7		
2788	D1	F717	F8		
2789	D1	F721	F2		
2790	D1	F722	F1		
2791	B4	F732	A9		
3701	E5	F733	A9		
3702	A6	F734	B9		
3703	A6	F735	B9		
3704	A5	F736	B9		
3705	B2	F737	F5		
3706	D5	F738	F2		
3707	C5	F739	F2		
3708	D5	F742	B8		
3709	E4	F743	D7		
3710	D3	F744	F4		
3711	C4	F745	F4		
3712	E2	I700	D5		
3713	C6	I701	D6		
3714	B5	I702	A6		
3715	B5	I703	A6		
3716	B6	I704	A6		
3717	E3	I705	C5		
3718	F3	I706	C4		
3721	B1	I707	C4		
3722	C1	I709	D3		
3723	B1	I710	E4		
3724	E1	I711	B3		
3725	D2	I712	B4		
3726	E1	I713	D3		
3727	E4	I714	B4		
3743	E3	I715	C4		
3746	C5	I716	D2		
3747	C6	I717	A5		
3748	B4	I718	B5		
3750	F2	I719	E2		
3756	E3	I720	D2		
3757	F3	I721	B2		
3760	E3	I722	B2		
3761	B8	I723	E2		
3762	D7	I724	D2		

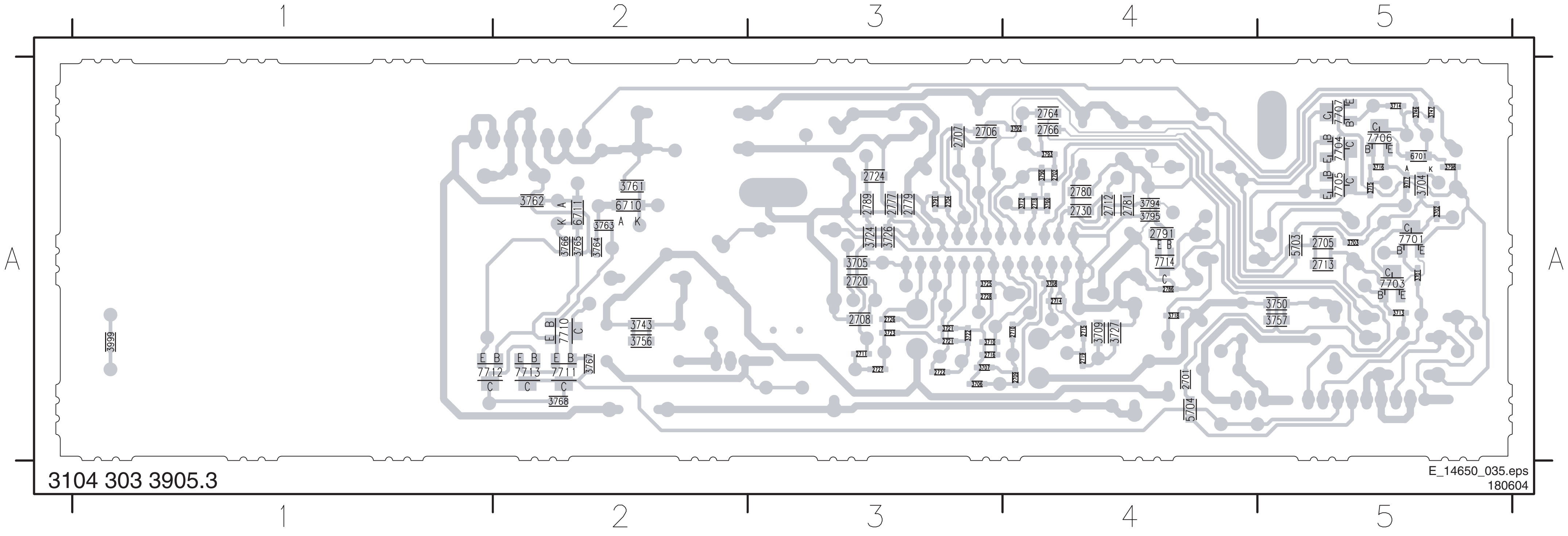
Layout PDP Audio (Top Side)

0045	A1
1701	A4
1702	A1
1735	A4
1736	A2
1739	A1
1M02	A4
2717	A2
2729	A4
2768	A2
2769	A2
2778	A1
2783	A1
2788	A3
2790	A3
3711	A3
3717	A2
3748	A2
5701	A2
5702	A3
5707	A3
5708	A4
5711	A2
5712	A4
7700	A3
9701	A4
9702	A3
9703	A2
9704	A2
9705	A4
9706	A2
9707	A2
9708	A1
9709	A1
9710	A1
9711	A1
9712	A4

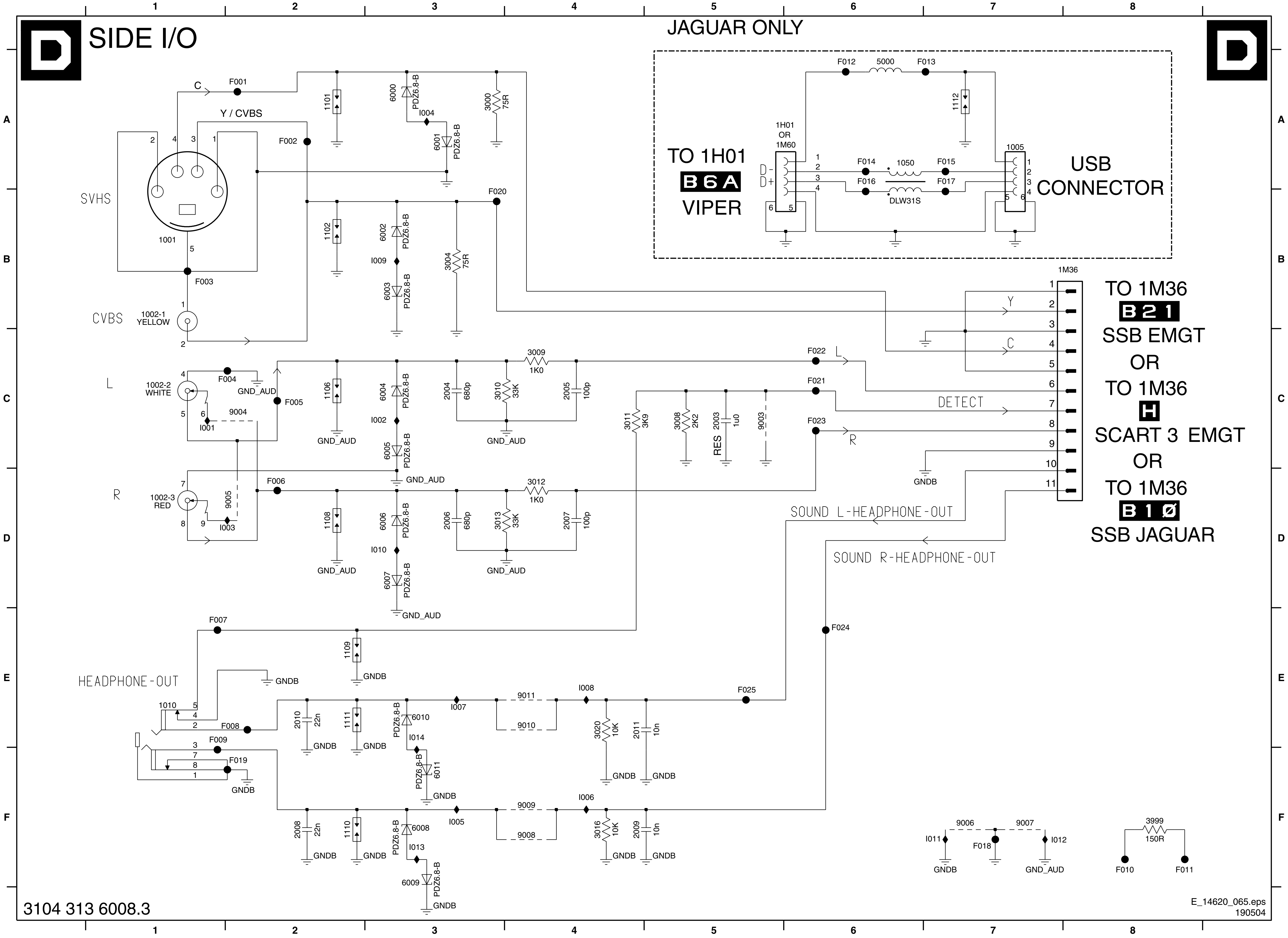

1
2
3
4
5
A
A
0045
3711
2768
2790
2788
5712
5708
1M02
7
1
9705
2783
3748
7700
2
24
25
9702
9706
2778
9707
2769
2729
9712
9704
2717
3
2
1702
4
1
9708
9709
9710
3717
5711
5701
5702
5707
1738
1701
9711
1739
9
1736
9701
PHILIPS
3104 303 3905.3
E_14650_034.eps
180604

Layout PDP Audio (Bottom Side)

2701	A4
2702	A4
2704	A3
2705	A5
2706	A3
2707	A3
2708	A3
2709	A4
2710	A4
2711	A3
2712	A4
2713	A5
2714	A4
2715	A4
2716	A3
2718	A4
2719	A4
2720	A3
2721	A3
2722	A3
2724	A3
2726	A3
2727	A3
2728	A3
2730	A4
2764	A4
2766	A4
2777	A3
2779	A3
2780	A4
2781	A4
2786	A4
2789	A3
2791	A4
3701	A5
3702	A5
3703	A5
3704	A5
3705	A3
3706	A3
3707	A3
3708	A4
3709	A4
3710	A3
3712	A4
3713	A5
3714	A5
3715	A5
3716	A5
3718	A4
3721	A3
3722	A3
3723	A3
3724	A3
3725	A3
3726	A3
3727	A4
3743	A2
3746	A5
3747	A5
3750	A5
3756	A2
3757	A5
3760	A4
3761	A2
3762	A2
3763	A2
3764	A2
3765	A2
3766	A2
3767	A2
3768	A2
3790	A4
3791	A3
3792	A4
3793	A4
3794	A4
3795	A4
3798	A5
3999	A1
5703	A5
5704	A4
6701	A5
6710	A2
6711	A2
7701	A5
7703	A5
7704	A5
7705	A5
7706	A5
7707	A5
7710	A2
7711	A2
7712	A1
7713	A2
7714	A4
9717	A5

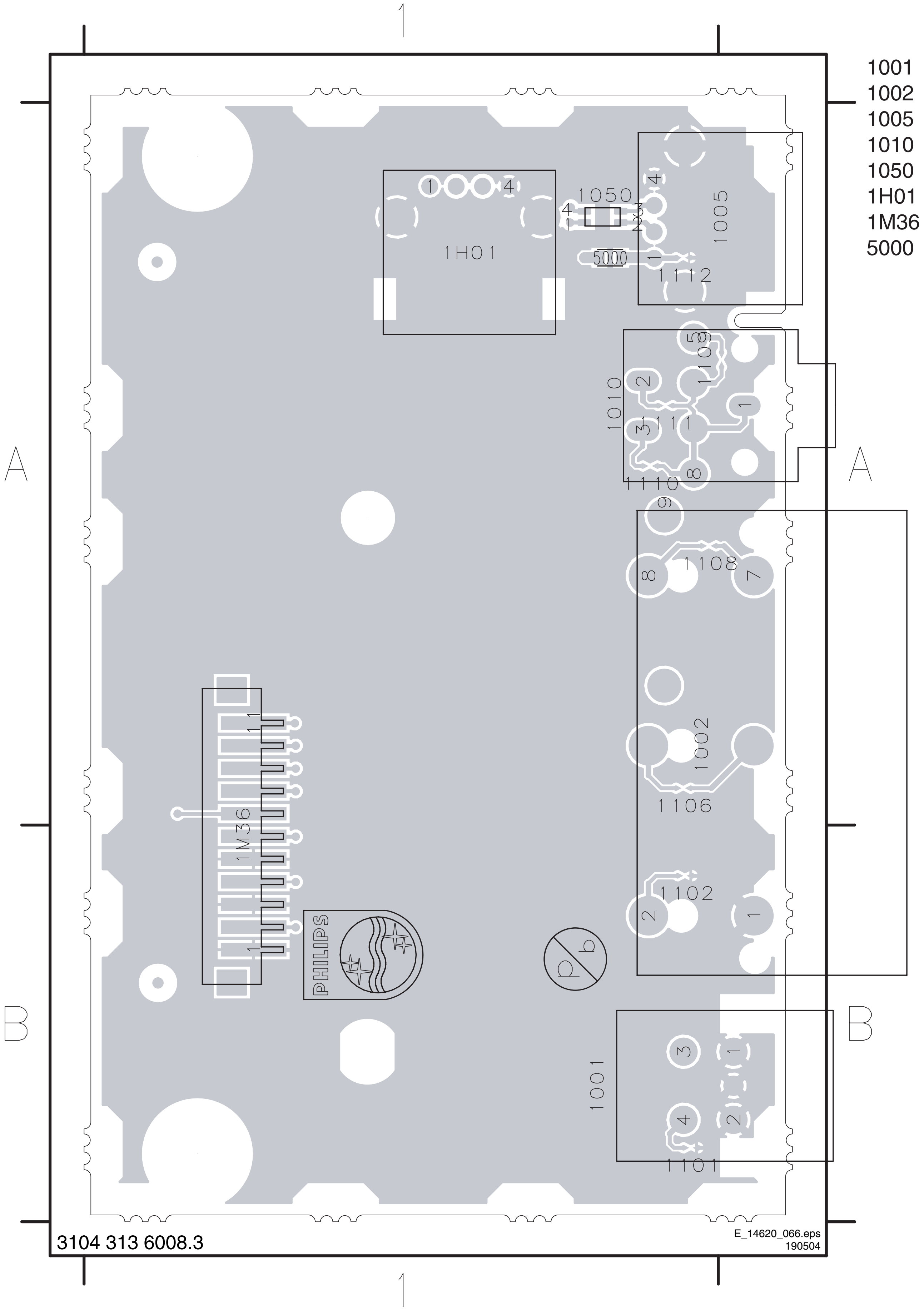

1
2
3
4
5
A
A
3999
3762
6711
3761
6710
3763
3743
3756
7712
7713
7711
7710
3768
2707
2706
2764
2766
2724
2789
2777
2779
3724
3726
3705
2720
2708
2780
2730
2712
2781
3794
3795
2791
7714
3709
3727
3750
3757
2701
5704
5703
2705
2713
7701
7703
7704
7705
7706
7707
6701
3704
3104 303 3905.3
E_14650_035.eps
180604

Side I/O Panel


D
SIDE I/O
JAGUAR ONLY
SVHS
CVBS
1002-1
YELLOW
1001
C
Y / CVBS
F001
F002
F003
F020
1101
1102
6000
PDZ6.8-B
6001
I004
3000
75R
6002
6003
I009
3004
75R
TO 1H01
B 6 A
VIPER
1H01
OR
1M60
D-
D+
F012
5000
F013
1112
F014
1050
F015
F016
F017
DLW31S
1005
USB
CONNECTOR
1M36
Y
C
TO 1M36
B 2 1
SSB EMGT
OR
TO 1M36
H
SCART 3 EMGT
OR
TO 1M36
B 1 0
SSB JAGUAR
L
1002-2
WHITE
F004
GND_AUD
F005
9004
I001
1106
6004
I002
6005
2004
680p
3010
33K
3009
1K0
2005
100p
F022
L
F021
DETECT
F023
R
3011
3K9
3008
2K2
2003
1u0
RES
9003
GNDB
R
1002-3
RED
9005
I003
F006
1108
6006
I010
6007
2006
680p
3013
33K
3012
1K0
2007
100p
SOUND L-HEADPHONE-OUT
SOUND R-HEADPHONE-OUT
F007
1109
HEADPHONE-OUT
1010
F008
F009
F019
F024
F025
2010
22n
1111
6010
I014
6011
I007
9011
9010
I008
3020
10K
2011
10n
2008
22n
1110
6008
I013
6009
I005
9009
9008
I006
3016
10K
2009
10n
9006
9007
I011
F018
I012
GND_AUD
3999
150R
F010
F011
3104 313 6008.3
E_14620_065.eps
190504

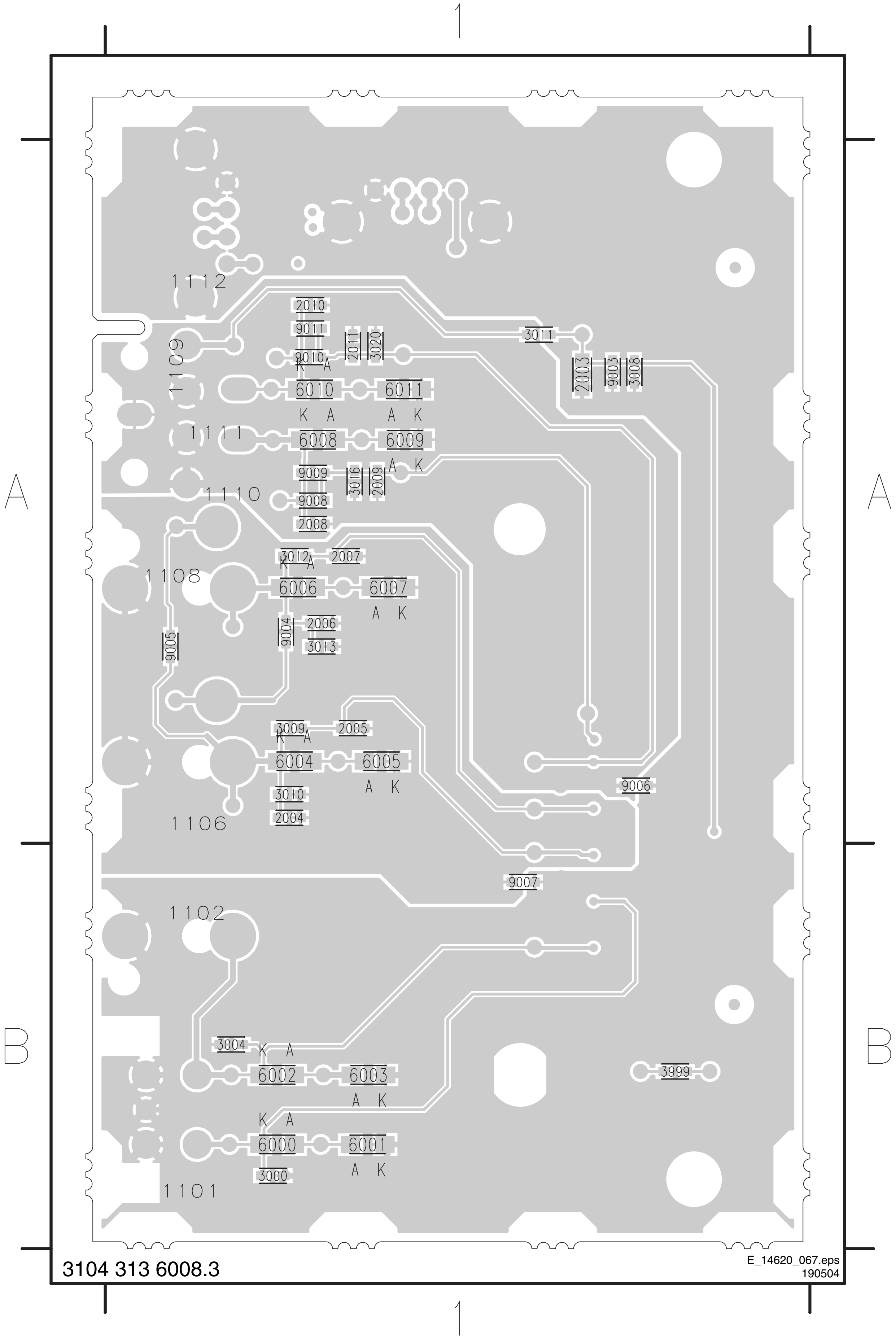
1001	B1
1002-1	B1
1002-2	C1
1002-3	D1
1005	A7
1010	E1
1050	A6
1101	A2
1102	B2
1106	C2
1108	D2
1109	E2
1110	F2
1111	E2
1112	A7
1H01	A6
1M36	B8
2003	C5
2004	C3
2005	C4
2006	D3
2007	D4
2008	F2
2009	F4
2010	E2
2011	E4
3000	A3
3004	B3
3008	C5
3009	C4
3010	C3
3011	C4
3012	D4
3013	D3
3016	F4
3020	E4
3999	F8
5000	A6
6000	A3
6001	A3
6002	B3
6003	B3
6004	C3
6005	C3
6006	D3
6007	D3
6008	F3
6009	F3
6010	E3
6011	F3
9003	C5
9004	C2
9005	D1
9006	F7
9007	F7
9008	F4
9009	F4
9010	E4
9011	E4
F001	A2
F002	A2
F003	B1
F004	C2
F005	C2
F006	D2
F007	E1
F008	E2
F009	E1
F010	F8
F011	F8
F012	A6
F013	A7
F014	A6
F015	A7
F016	A6
F017	A7
F018	F7
F019	F2
F020	B3
F021	C6
F022	C6
F023	C6
F024	E6
F025	E5
I001	C1
I002	C3
I003	D2
I004	A3
I005	F3
I006	F4
I007	E3
I008	E4
I009	B3
I010	D3
I011	F7
I012	F7
I013	F3
I014	E3

Layout Side I/O Panel (Top Side)


1
A
B
1H01
1050
5000
1005
1112
1010
1111
1110
1109
1108
1002
1106
1102
1001
1101
1M36
PHILIPS
3104 313 6008.3
E_14620_066.eps
190504

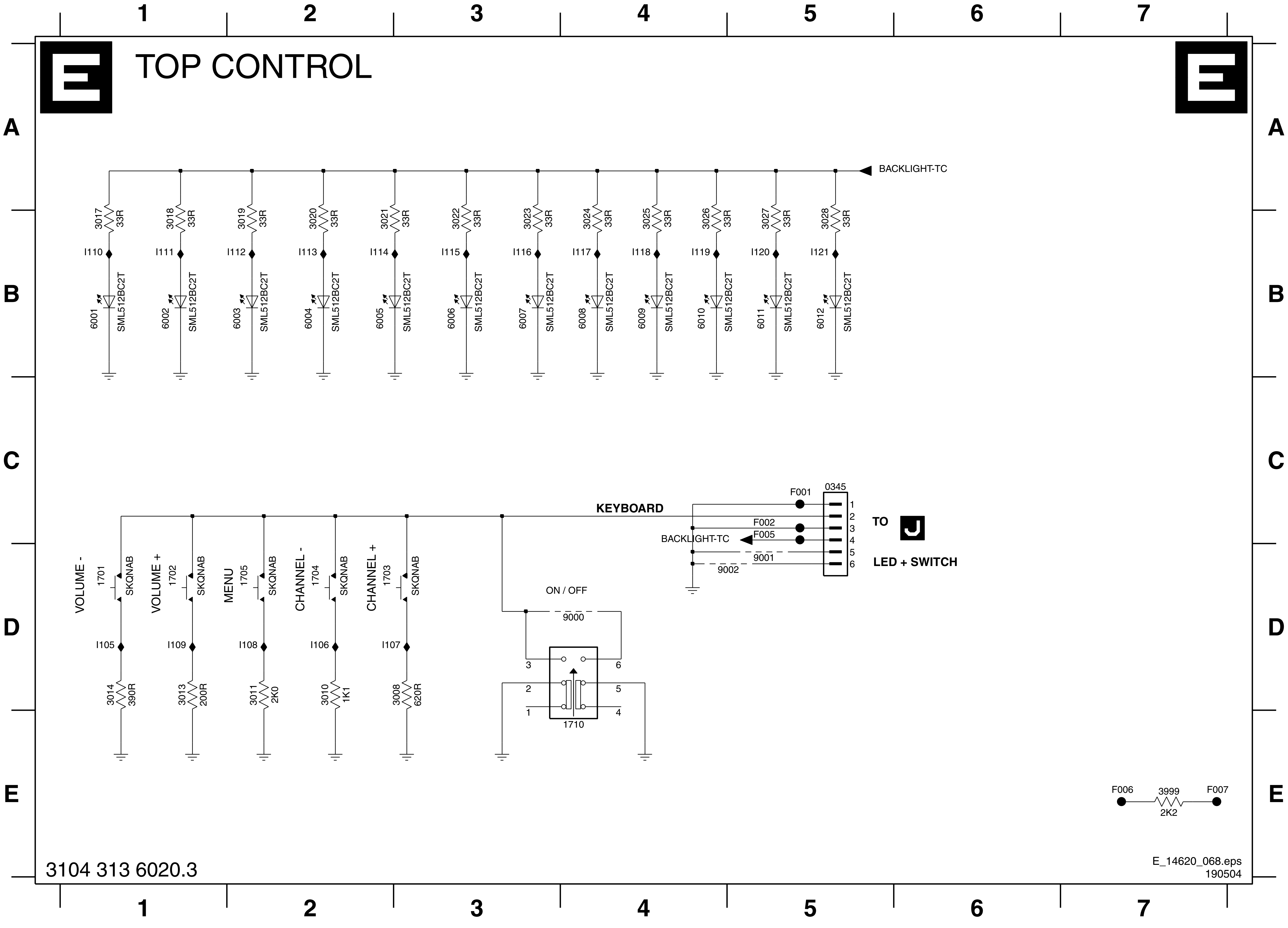
1001	B1
1002	A1
1005	A1
1010	A1
1050	A1
1H01	A1
1M36	B1
5000	A1

Layout Side I/O Panel (Bottom Side)


1
A
B
1112
1109
1111
1110
1108
1106
1102
1101
2010
9011
9010
2011
3020
3011
2003
9003
3008
6010
6011
6008
6009
9009
3016
2009
9008
2008
3012
2007
6006
6007
9004
2006
3013
9005
3009
2005
6004
6005
3010
2004
9006
9007
3004
6002
6003
6000
6001
3000
3999
K A
A K
3104 313 6008.3
E_14620_067.eps
190504

2003	A1
2004	A1
2005	A1
2006	A1
2007	A1
2008	A1
2009	A1
2010	A1
2011	A1
3000	B1
3004	B1
3008	A1
3009	A1
3010	A1
3011	A1
3012	A1
3013	A1
3016	A1
3020	A1
3999	B1
6000	B1
6001	B1
6002	B1
6003	B1
6004	A1
6005	A1
6006	A1
6007	A1
6008	A1
6009	A1
6010	A1
6011	A1
9003	A1
9004	A1
9005	A1
9006	A1
9007	B1
9008	A1
9009	A1
9010	A1
9011	A1

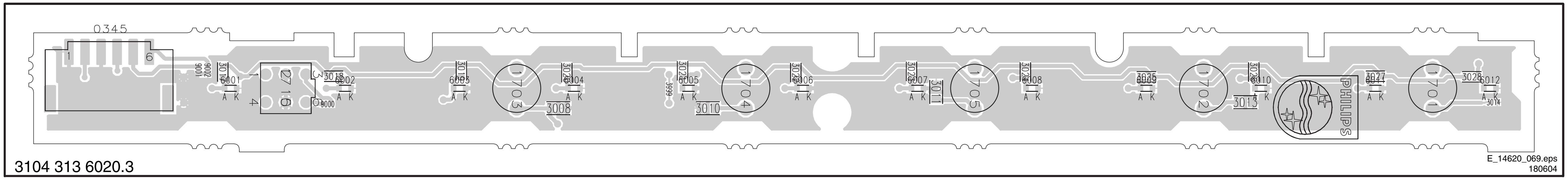
Top Control Panel


1 2 3 4 5 6 7
A B C D E
E
TOP CONTROL
E
BACKLIGHT-TC
3017 33R
3018 33R
3019 33R
3020 33R
3021 33R
3022 33R
3023 33R
3024 33R
3025 33R
3026 33R
3027 33R
3028 33R
I110
I111
I112
I113
I114
I115
I116
I117
I118
I119
I120
I121
6001 SML512BC2T
6002 SML512BC2T
6003 SML512BC2T
6004 SML512BC2T
6005 SML512BC2T
6006 SML512BC2T
6007 SML512BC2T
6008 SML512BC2T
6009 SML512BC2T
6010 SML512BC2T
6011 SML512BC2T
6012 SML512BC2T
KEYBOARD
F001
0345
1
2
3
4
5
6
F002
F005
BACKLIGHT-TC
9001
9002
TO
J
LED + SWITCH
VOLUME -
1701 SKQNAB
VOLUME +
1702 SKQNAB
MENU
1705 SKQNAB
CHANNEL -
1704 SKQNAB
CHANNEL +
1703 SKQNAB
I105
I109
I108
I106
I107
3014 390R
3013 200R
3011 2K0
3010 1K1
3008 620R
ON / OFF
9000
3
6
2
5
1
4
1710
F006
3999
2K2
F007
3104 313 6020.3
E_14620_068.eps
190504
1 2 3 4 5 6 7

0345	C5
1701	D1
1702	D1
1703	D2
1704	D2
1705	D2
1710	E4
3008	D3
3010	D2
3011	D2
3013	D1
3014	D1
3017	B1
3018	B1
3019	B2
3020	B2
3021	B2
3022	B3
3023	B3
3024	B4
3025	B4
3026	B4
3027	B5
3028	B5
3999	E7
6001	B1
6002	B1
6003	B2
6004	B2
6005	B2
6006	B3
6007	B3
6008	B4
6009	B4
6010	B4
6011	B5
6012	B5
9000	D4
9001	D5
9002	D5
F001	C5
F002	C5
F005	C5
F006	E7
F007	E7
I105	D1
I106	D2
I107	D2
I108	D2
I109	D1
I110	B1
I111	B1
I112	B2
I113	B2
I114	B2
I115	B3
I116	B3
I117	B4
I118	B4
I119	B4
I120	B5
I121	B5

Layout Top Control Panel (Top Side)

0345
1701
1702
1703
1704
1705
1710
3008
3010
3011
3013
3014
3017
3018
3019
3020
3021
3022
3023
3024
3025
3026
3027
3028
3999
6001
6002
6003
6004
6005
6006
6007
6008
6009
6010
6011
6012
9000
9001
9002


0345
1
6
9002
9001
3014
6001
A K
1
4
7710
3
6
3018
6002
9000
3017
6003
1703
3024
6004
3008
3999
3021
6005
1704
3010
3023
6006
3020
6007
3011
1705
3028
6008
3025
6009
1702
3022
6010
3013
PHILIPS
3027
6011
1701
3026
6012
3014
3104 313 6020.3
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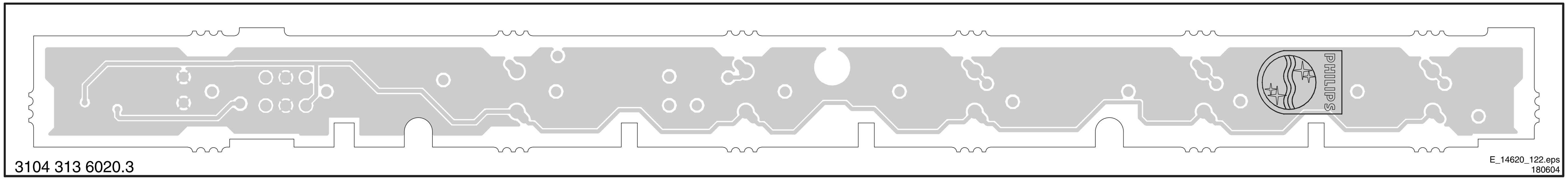
180604

Layout Top Control Panel (Bottom Side)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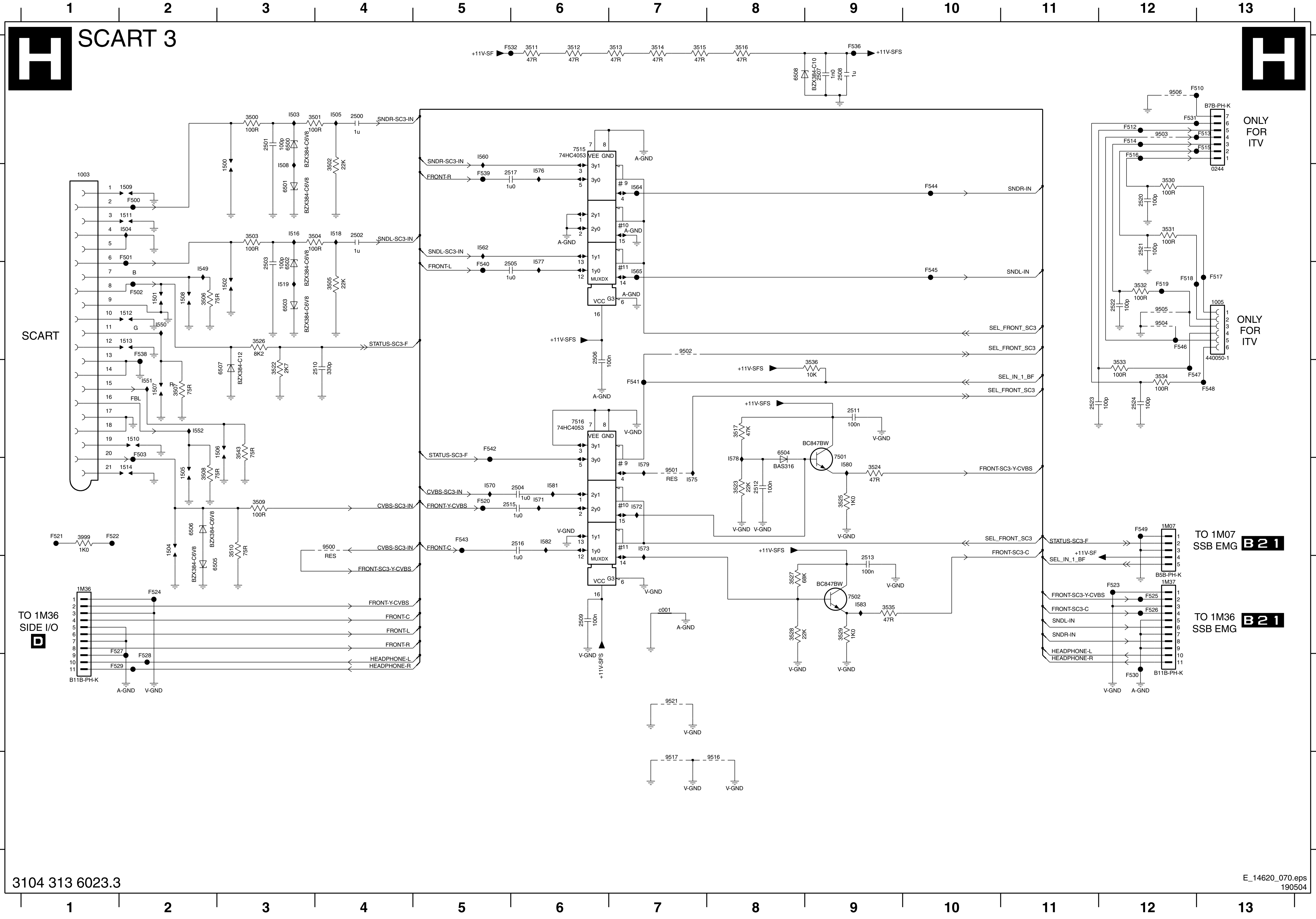
SCART 3 Panel


H
SCART 3
SCART
1003
TO 1M36
SIDE I/O
D
1M36
B11B-PH-K
ONLY
FOR
ITV
B7B-PH-K
0244
1005
440050-1
TO 1M07
SSB EMG
B21
1M07
B5B-PH-K
TO 1M36
SSB EMG
B21
1M37
B11B-PH-K
7515
74HC4053
7516
74HC4053
MUXDX
BC847BW
7501
7502
BAS316
BZX384-C6V8
BZX384-C12
BZX384-C10
+11V-SF
+11V-SFS
A-GND
V-GND
SNDR-SC3-IN
SNDL-SC3-IN
STATUS-SC3-F
CVBS-SC3-IN
FRONT-SC3-Y-CVBS
FRONT-Y-CVBS
FRONT-C
FRONT-L
FRONT-R
HEADPHONE-L
HEADPHONE-R
SNDR-IN
SNDL-IN
SEL_FRONT_SC3
SEL_IN_1_BF
FRONT-SC3-C
RES
3104 313 6023.3
E_14620_070.eps
190504

0244	B13
1003	B1
1005	C13
1500	B3
1501	C2
1502	C3
1504	E2
1505	E2
1506	D3
1507	D2
1508	C2
1509	B2
1510	D2
1511	B2
1512	C2
1513	C2
1514	E2
1M07	E12
1M36	F1
1M37	F12
2500	A4
2501	A3
2502	B4
2503	C3
2504	E6
2505	C5
2506	C6
2507	A9
2508	A9
2509	F6
2510	D4
2511	D9
2512	E8
2513	F9
2515	E5
2516	E6
2517	B5
2520	B12
2521	B12
2522	C12
2523	D11
2524	D12
3500	A3
3501	A3
3502	B4
3503	B3
3504	B3
3505	C4
3506	C2
3507	D2
3508	E2
3509	E3
3510	E3
3511	A6
3512	A6
3513	A7
3514	A7
3515	A7
3516	A8
3517	D8
3522	D3
3523	E8
3524	E9
3525	E9
3526	C3
3527	F8
3528	F8
3529	F9
3530	B12
3531	B12
3532	C12
3533	D12
3534	D12
3535	F9
3536	D9
3543	D3
3999	E1
6500	A3
6501	B3
6502	C3
6503	C3
6504	D8
6505	F2
6506	E2
6507	D3
6508	A8
7501	E9
7502	F9
7515	A6
7516	D6
9500	E4
9501	E7
9502	C7
9503	A12
9504	C12
9505	C12
9506	A12
9516	H8
9517	H7
9521	G7
F500	B2
F501	B2
F502	C2
F503	D2
F510	A13
F512	A12
F513	A13
F514	A12
F515	A13
F516	A12
F517	C13
F518	C12
F519	C12
F520	E5
F521	E1
F522	E1
F523	F12
F524	F2
F525	F12
F526	F12
F527	F1
F528	G2
F529	G1
F530	G12
F531	A12
F532	A5
F536	A9
F538	C2
F539	B5
F540	C5
F541	D7
F542	D5
F543	E5
F544	B10
F545	C10
F546	C12
F547	D12
F548	D13
F549	E12
I503	A3
I504	B2
I505	A4
I508	B3
I516	B3
I518	B4
I519	C3
I549	C2
I550	C2
I551	D2
I552	D2
I560	A5
I562	B5
I564	B7
I565	C7
I570	E5
I571	E6
I572	E7
I573	E7
I575	E7
I576	B6
I577	B6
I578	E8
I579	E7
I580	E9
I581	E6
I582	E6
I583	F9
c001	F7

Layout SCART 3 Panel (Top Side)

1003	A1
1005	A3
1M07	A1
1M36	A4
1M37	A3
9500	A3
9509	A3
9510	A3
9511	A4
9512	A1
9513	A2
9514	A1
9515	A3
9523	A2
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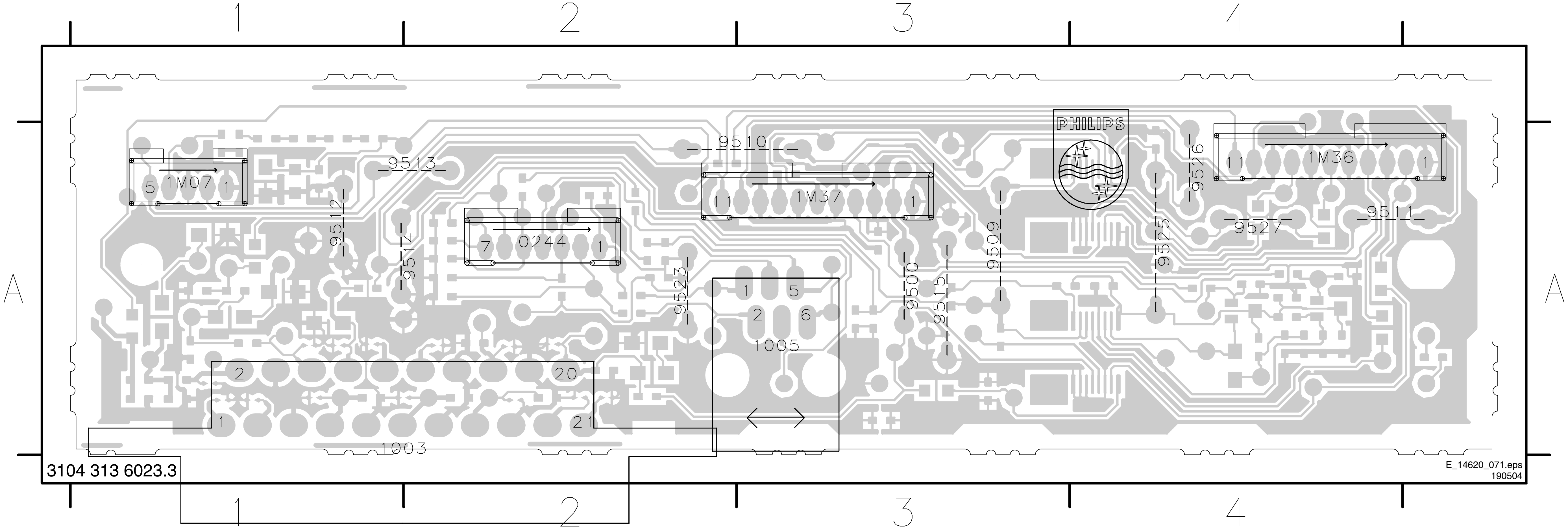
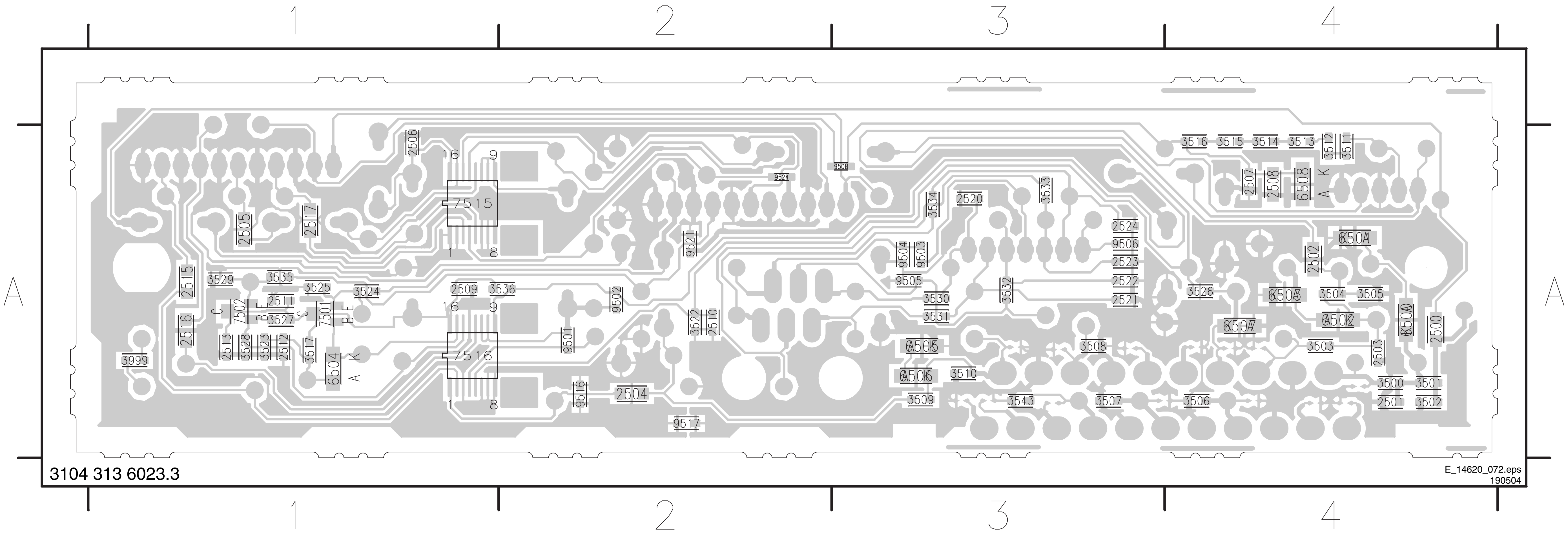
9526	A4
9527	A4

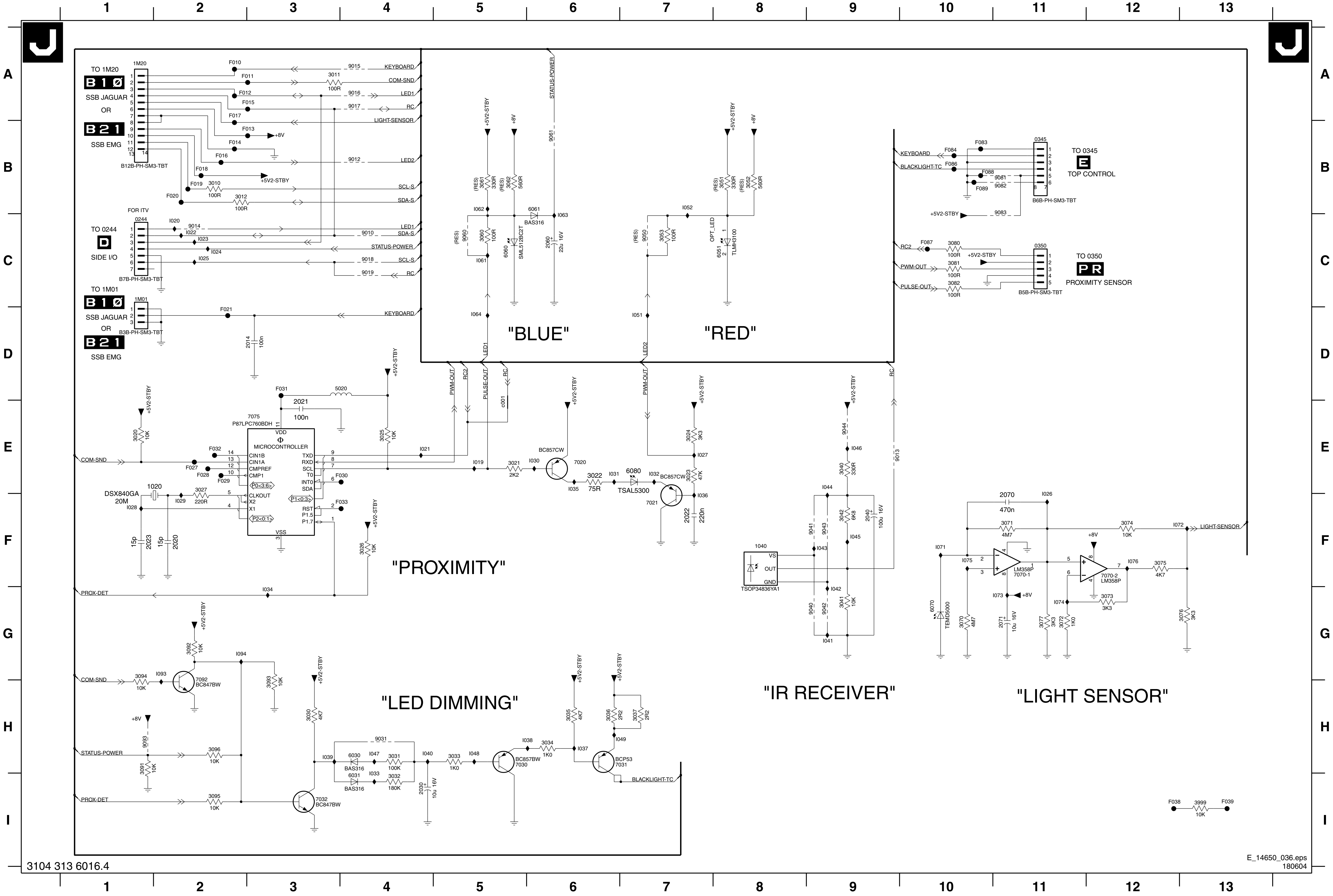

1
2
3
4
A
A
PHILIPS
1M07
5
1
9513
9510
1M37
11
1
1M36
11
1
9526
9512
9514
0244
7
1
9523
9500
9515
9509
9525
9527
9511
1
5
2
6
1005
2
20
1
21
1003
3104 313 6023.3
E_14620_071.eps
190504

Layout SCART 3 Panel (Bottom Side)

2500	A4
2501	A4
2502	A4
2503	A4
2504	A2
2505	A1
2506	A1
2507	A4
2508	A4
2509	A1
2510	A2
2511	A1
2512	A1
2513	A1
2515	A1
2516	A1
2517	A1
2520	A3
2521	A3
2522	A3
2523	A3
2524	A3
3500	A4
3501	A4
3502	A4
3503	A4
3504	A4
3505	A4
3506	A4
3507	A3
3508	A3
3509	A3
3510	A3
3511	A4
3512	A4
3513	A4
3514	A4
3515	A4
3516	A4
3517	A1
3522	A2
3523	A1
3524	A1
3525	A1
3526	A4
3527	A1
3528	A1
3529	A1
3530	A3
3531	A3
3532	A3
3533	A3
3534	A3
3535	A1
3536	A2
3543	A3
3999	A1
6500	A4
6501	A4
6502	A4
6503	A4
6504	A1
6505	A3
6506	A3
6507	A4
6508	A4
7501	A1
7502	A1
7515	A2
7516	A2
9501	A2
9502	A2
9503	A3
9504	A3
9505	A3
9506	A3
9508	A3
9516	A2
9517	A2
9521	A2
9524	A2

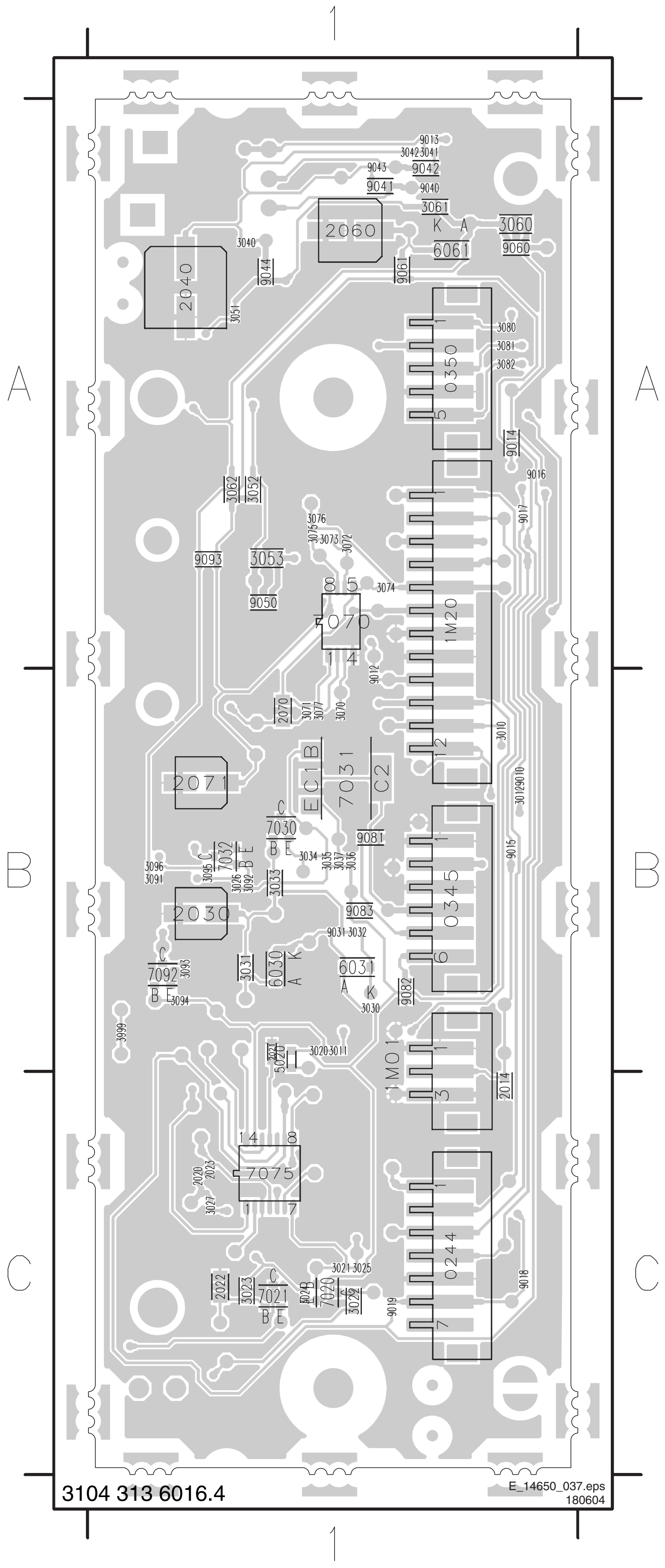

1
2
3
4
A
A
3516
3515
3514
3513
3512
3511
2507
2508
6508
2506
7515
9524
9508
3534
2520
3533
2505
2517
9521
2524
9506
2523
2522
2521
9504
9503
9505
3532
2502
6501
2515
3529
3535
3525
3524
2509
3536
9502
3530
3531
3526
6503
3504
3505
2511
3527
7502
7501
2516
2513
3528
3523
2512
3517
6504
7516
9501
3522
2510
6505
3508
6507
6502
3503
2503
6500
2500
3999
6506
3510
9516
2504
3509
3543
3507
3506
3500
3501
2501
3502
9517
3104 313 6023.3
E_14620_072.eps
190504

LED and Switch Panel


J
TO 1M20
B10
SSB JAGUAR
OR
B21
SSB EMG
1M20
B12B-PH-SM3-TBT
FOR ITV
TO 0244
D
SIDE I/O
0244
B7B-PH-SM3-TBT
TO 1M01
B10
SSB JAGUAR
OR
B21
SSB EMG
1M01
B3B-PH-SM3-TBT
KEYBOARD
COM-SND
LED1
RC
LIGHT-SENSOR
LED2
SCL-S
SDA-S
STATUS-POWER
+8V
+5V2-STBY
"BLUE"
"RED"
BAS316
SML-512BC2T
TLMH3100
OPT_LED
TO 0345
E
TOP CONTROL
B6B-PH-SM3-TBT
BLACKLIGHT-TC
TO 0350
PR
PROXIMITY SENSOR
B5B-PH-SM3-TBT
RC2
PWM-OUT
PULSE-OUT
7075
P87LPC760BDH
MICROCONTROLLER
DSX840GA
20M
BC857CW
TSAL5300
"PROXIMITY"
PROX-DET
TSOP34836YA1
"IR RECEIVER"
LM358P
TEMD5000
"LIGHT SENSOR"
"LED DIMMING"
BC847BW
BC857BW
BCP53
3104 313 6016.4
E_14650_036.eps
180604

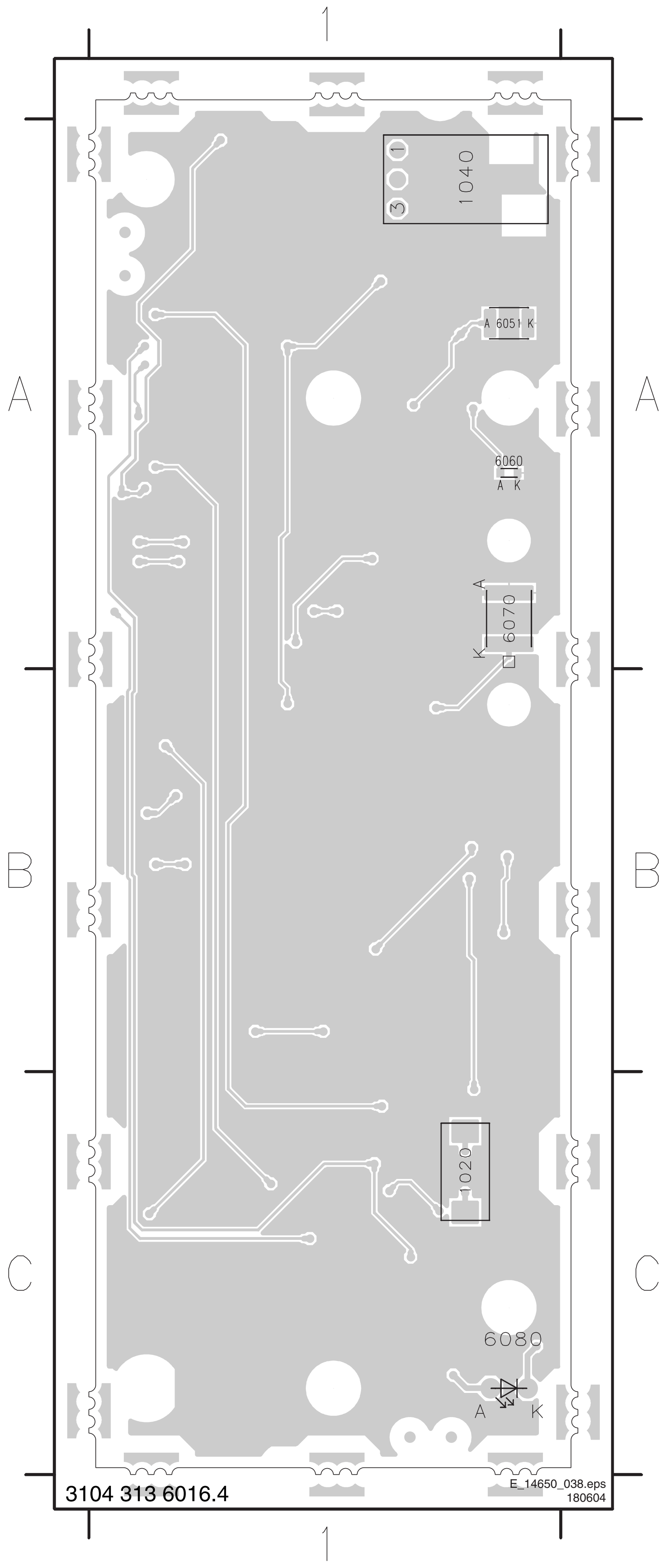
0244	C1
0345	B11
0350	C11
1020	E2
1040	F8
1M01	C1
1M20	A1
2014	D3
2020	F2
2021	E3
2022	F7
2023	F1
2030	I4
2040	F9
2060	C6
2070	F11
2071	G11
3010	B2
3011	A3
3012	B2
3020	E1
3021	E5
3022	E6
3023	E7
3024	E7
3025	E4
3026	F4
3027	E2
3030	H3
3031	H4
3032	I4
3033	H5
3034	H6
3035	H6
3036	H6
3037	H7
3040	E9
3041	G9
3042	F9
3051	B8
3052	B8
3053	C7
3060	C5
3061	B5
3062	B5
3070	G10
3071	F11
3072	G11
3073	G12
3074	F12
3075	F12
3076	G13
3077	G11
3080	C10
3081	C10
3082	C10
3091	H1
3092	G2
3093	H3
3094	G1
3095	I2
3096	H2
3999	I13
5020	D4
6030	H4
6031	I4
6051	C8
6060	C5
6061	B6
6070	G10
6080	E7
7020	E6
7021	F7
7030	H5
7031	H6
7032	I3
7070-1	F11
7070-2	F12
7075	E3
7092	H2
9010	C4
9012	B4
9013	E9
9014	C2
9015	A4
9016	A4
9017	A4
9018	C4
9019	C4
9031	H4
9040	G9
9041	F9
9042	G9
9043	F9
9044	E9
9050	C7
9060	C5
9061	B6
9081	B11
9082	B11
9083	C11
9093	H1
F010	A2
F011	A3
F012	A2
F013	B3
F014	B2
F015	A3
F016	B2
F017	A2
F018	B2
F019	B2
F020	B2
F021	D2
F027	E2
F028	E2
F029	E2
F030	E4
F031	D3
F032	E2
F033	F4
F038	I12
F039	I13
F083	B10
F084	B10
F086	B10
F087	C10
F088	B10
F089	B10
I019	E5
I020	C2
I021	E4
I022	C2
I023	C2
I024	C2
I025	C2
I026	F11
I027	E7
I028	F1
I029	F2
I030	E6
I031	E6
I032	E7
I033	I4
I034	G3
I035	E6
I036	F7
I037	H6
I038	H6
I039	H3
I040	H4
I041	G9
I042	G9
I043	F9
I044	E9
I045	F9
I046	E9
I047	H4
I048	H5
I049	H7
I051	D7
I052	B7
I061	C5
I062	B5
I063	C6
I064	D5
I071	F10
I072	F12
I073	G11
I074	G11
I075	F10
I076	F12
I093	G2
I094	G2
c001	E5

Layout LED and Switch Panel (Top Side)


1
A
B
C
2040
2060
3060
9060
6061
0350
1M20
7070
2071
7031
2030
0345
7092
1M01
2014
7075
0244
7021
7020
3104 313 6016.4
E_14650_037.eps
180604

0244	C1
0345	B1
0350	A1
1040	A1
1M01	B1
1M20	A1
2014	C1
2020	C1
2021	B1
2022	C1
2023	C1
2030	B1
2040	A1
2060	A1
2070	B1
2071	B1
3010	B1
3011	B1
3012	B1
3020	B1
3021	C1
3022	C1
3023	C1
3024	C1
3025	C1
3026	B1
3027	C1
3030	B1
3031	B1
3032	B1
3033	B1
3034	B1
3035	B1
3036	B1
3037	B1
3040	A1
3041	A1
3042	A1
3051	A1
3052	A1
3053	A1
3060	A1
3061	A1
3062	A1
3070	B1
3071	B1
3072	A1
3073	A1
3074	A1
3075	A1
3076	A1
3077	B1
3080	A1
3081	A1
3082	A1
3091	B1
3092	B1
3093	B1
3094	B1
3095	B1
3096	B1
3999	B1
5020	B1
6030	B1
6031	B1
6061	A1
6080	C1
7020	C1
7021	C1
7030	B1
7031	B1
7032	B1
7070	A1
7075	C1
7092	B1
9010	B1
9012	B1
9013	A1
9014	A1
9015	B1
9016	A1
9017	A1
9018	C1
9019	C1
9031	B1
9040	A1
9041	A1
9042	A1
9043	A1
9044	A1
9050	A1
9060	A1
9061	A1
9081	B1
9082	B1
9083	B1
9093	A1

Layout LED and Switch Panel (Bottom Side)


1
A
B
C
1040
6051
6060
6070
1020
6080
A
K
3104 313 6016.4
E_14650_038.eps
180604

1020	C1
1040	A1
6051	A1
6060	A1
6070	A1
6080	C1

8. Alignments

Index of this chapter:

8.1 General Alignment Conditions
8.2 Hardware Alignments
8.3 Software Alignments
8.4 Option Settings

8.1 General Alignment Conditions

8.1.1 Start Conditions

Perform all electrical adjustments under the following conditions:

- Power supply voltage (depends on region):
  - **AP-NTSC:** 120 V_{AC} or 230 V_{AC} / 50 Hz (± 10%).
  - **AP-PAL-multi**: 120 - 230 V_{AC} / 50 Hz (± 10%).
  - **EU**: 230 V_{AC} / 50 Hz (± 10%).
  - **LATAM-NTSC**: 120 - 230 V_{AC} / 50 Hz (± 10%).
  - **US**: 120 V_{AC} / 60 Hz (± 10%).
- Connect the set to the mains via an isolation transformer with low internal resistance.
- Allow the set to warm up for approximately 10 to 15 minutes.
- Measure voltages and waveforms in relation to chassis ground (with the exception of the voltages on the primary side of the power supply).
  Caution: never use heatsinks as ground.
- Test probe: Ri > 10 Mohm, Ci < 20 pF.
- Use an isolated trimmer/screwdriver to perform alignments.

8.1.2 Initial Settings

Perform all electrical adjustments with the following initial settings (via the "Active Control" button on the RC):

1. To avoid the working of the light sensor, set "Active Control" to "Off".
2. Set "Smart Picture" to "Natural".
3. Set "Active Display" to "Off"

8.1.3 Alignment Sequence

- First, set the correct options:
  - In SAM, select SERVICE OPTIONS -> OPT. NO,
  - Fill in the option settings according to the set sticker (see also paragraph "Option Settings"),
  - Select STORE OPTIONS and push "OK" on the remote control,
  - After storing, the set must be restarted!
- Warming up (> 10 minutes).
- White point alignment.

8.2 Hardware Alignments

No hardware alignments are necessary.

8.3 Software Alignments

Put the set in SAM mode (see the "Service Modes, Error Codes and Fault Finding" section). The SAM menu will now appear on the screen. Select ALIGNMENTS and go to one of the sub menus. The alignments are explained below.

Notes:

- All changes must be stored manually.
- If an empty EAROM (permanent memory) is detected, all settings are set to pre-programmed default values.

8.3.1 GENERAL

For the next alignments, supply the following test signals via a video generator to the RF input:

- **EU/AP-PAL** models: a PAL B/G TV-signal with a signal strength of at least 1 mV and a frequency of 475.25 MHz
- **US/AP-NTSC** models: an NTSC M/N TV-signal with a signal strength of at least 1 mV and a frequency of 61.25 MHz (channel 3).
- **LATAM** models: an NTSC M or PAL M TV-signal with a signal strength of at least 1 mV and a frequency of 61.25 MHz (channel 3).

LUMA GAIN
Fixed setting of "1".

DELTA LUMA GAIN FOR AUX (only when a 2nd Tuner is present)
Fixed setting of "0 dB".

IF AFC
Alignment procedure:

1. During the IF AFC-parameter adjustment, one can see OSD feedback on the screen.
2. The OSD feedback can give four kinds of messages:
3. The first item ("IN/OUT") informs you whether you are in or out of the AFC-window.
4. The second item ("HIGH/LOW") informs you whether the AFC-frequency is too high or too low.

Table 8-1 AFC

AFC-window	AFC-frequency vs. reference
Out	High
In	High
[In]	[Low]
Out	Low

1. Adjust the IF AFC parameter until the **first** value is within the AFC window (= IN).
2. Next, adjust the IF AFC parameter until the **second** value is LOW.

IF LPRIME AFC (only for EU sets)
Same procedure as described above, but with SECAM L/L' signal source.

TUNER AGC
Measure the DC voltage on pin 1 of the (main) Tuner. You can adjust this voltage by adjusting the TUNER AGC item in the SAM menu. Alignment is correct when the DC voltage is just below 3.5 V.

IF AFC TUNER 2 (only when a 2nd Tuner is present)
Use the same procedure as described above (under IF AFC) with the set switched to the DW source.

IF LPRIME AFC TUNER 2 (only when a 2nd Tuner is present)
Use the same procedure as described above (under IF LPRIME AFC) with the set switched to the DW source.

TUNER AGC TUNER 2 (only when a 2nd Tuner is present)
Use the same procedure as described above (under TUNER AGC) with the set switched to the DW source. Measure on pin 1 of the DW Tuner.

BLEND INTENSITY
Use this alignment when you replace the microcontroller, NVM, or the EBILD. It aligns the level of transparency of the menu-picture blended into the main-picture. Fixed setting of "16".

8.3.2 2FH ADC ALIGNMENT

Only necessary to align, when the A/D converter or NVM is replaced. Use the default values as mentioned in the table.

Table 8-2 “2fH ADC alignment”

Menu item	Value
Red Gain RGB	106
Blue Gain RGB	112
Green Gain RGB	133
Red Offset RGB	40
Blue Offset RGB	41
Green Offset RGB	43
Red Gain YPbPr *	115
Blue Gain YPbPr *	118
Green Gain YPbPr *	102
Red Offset YPbPr *	59
Blue Offset YPbPr *	56
Green Offset YPbPr *	35
* = only for sets with YPbPr input	

8.3.3 WHITE POINT

- Set ACTIVE CONTROL to "Off".
- In the TV -> PICTURE user menu set:
  - DYNAMIC CONTRAST to "Off".
  - COLOUR ENHANCEMENT to "Off".
  - COLOUR to "0".
  - CONTRAST to "100".
  - BRIGHTNESS to "43".
- Go to the SAM and select ALIGNMENTS -> WHITE POINT.

Method 1 (with colour analyser):
- Use a 100% white screen as input signal and set the following values:
  - COLOR TEMPERATURE: "Tint to be aligned".
  - WHITEPOINTRED: "127".
  - WHITEPOINTGREEN: "127".
  - WHITEPOINTBLUE: "127".
  - RED BL OFFSET: "7"
  - GREEN BL OFFSET: "7".
- Measure with a calibrated (phosphor- independent) colour analyser (e.g. Minolta CA-210) in the centre of the screen. This measurement needs to be done in a dark environment.
- **Cut off alignment:** Adjust, by means of changing the value of one or both OFFSET's, to the correct x,y coordinates for the tint "NORMAL" (see table "White D alignment values"). Tolerance: dx,dy: ± 0.004.
- **White point alignment:** Adjust by means of decreasing the value of one or two white points, the correct x,y coordinates (see table "White D alignment values"). Tolerance: dx,dy: ± 0.004.
- Repeat this step for the other Colour Temperatures that need to be aligned.
- When finished press "Store" to store the aligned values to the NVM.

Table 8-3 White D alignment values

Colour Temp.	Cool	Normal	Warm
X	0.275	0.286	0.315
Y	0.291	0.301	0.335

Method 2 (without colour analyser):
If you do not have a colour analyser, you can use the default values. This is the next best solution. The default values are average values coming from production (statistics).
1. Select a COLOUR TEMPERATURE (e.g. COOL, NORMAL, or WARM).
2. Set the RED, GREEN and BLUE default values according to the values in the "Tint settings" table.
3. When finished press "Store" to store the aligned values to the NVM.

Table 8-4 Tint settings

	Cool		Normal		Warm	
	42"	50"	42"	50"	42"	50"
R	127	127	127	127	127	127
G	122	125	119	121	113	114
B	118	118	111	109	94	87

8.3.4 LUM. DEL.

With this Luminance Delay alignment, you place the luminance information exactly on the chrominance information (brightness is pushed onto the colour). Use a colour bar / grey scale pattern as test signal.
- **LUM. DELAY PAL BG:** Apply a PAL BG colour bar / grey scale pattern as a test signal. Adjust this parameter until the transients of the colour part and black and white part of the test pattern are at the same position. Default value is "**7**".
- **LUM. DELAY PAL I:** Apply a PAL I colour bar/grey scale pattern as a test signal. Adjust this parameter until the transients of the colour part and black and white part of the test pattern are at the same position. Default value is "**9**".
- **LUM. DELAY SECAM:** Apply a SECAM colour bar/grey scale pattern as a test signal. Adjust this parameter until the transients of the colour part and black and white part of the test pattern are at the same position. Default value is "**9**".
- **LUM. DELAY BYPASS:** apply a NTSC colour bar/grey scale pattern as a test signal. Adjust this value until the transients of the colour and black and white part of the test area are at the same position. Default value is "**6**".

8.4 Option Settings

8.4.1 Introduction

The microprocessor communicates with a large number of I^2C ICs in the set. To ensure good communication and to make digital diagnosis possible, the microprocessor has to know which ICs to address. The presence / absence of these specific ICs (or functions) is made known by the option codes.

Notes:
- After changing the option(s), save them with the STORE command.
- The new option setting is only active after the TV is switched "off" and "on" again with the Mains switch (the EAROM is then read again).

8.4.2 DEALER OPTIONS

Table 8-5 Dealer options

Menu name	Subjects	Options	Description
Personal Options	Picture Mute	Yes	Picture (blue) mute active in case no picture detected
		No	Noise in case of no picture detected
	Virgin Mode	Yes	TV starts up (once) with language selection menu after mains switch "on" for the first time (virgin mode)
		No	TV does not starts up (once) with language selection menu after mains switch "on" for the first time (virgin mode)
	Auto Store Mode (only for EU and AP-PAL sets)	None	Autostore mode disabled (not in installation menu)
		PDC-VPS	Autostore mode via ATS (PDC/VPS) enabled
		TXT page	Autostore mode via ACI enabled
		PDC-VPS-TXT	Autostore mode via ACI or ATS enabled
	TXT Preference (only for EU and AP-PAL sets)	TOP	Preference to TOP Teletext
		FLOF	Preference to FLOF Teletext
	DVD door lock (only for sets with integrated DVD)	Yes	To disable the DVD tray opening function
		No	To enable the DVD tray opening function
	AmbiLight Demo	Yes	AmbiLight demo via "MENU" button enabled
		No	AmbiLight demo via "MENU" button disabled

8.4.3 SERVICE OPTIONS

Select the sub menu's to set the initialisation codes (options) of the set via text menus.

Table 8-6 Service options

Menu-item	Subjects	Options	Description
Dual Screen	PIP/Dual Screen	Yes / No	Feature present / not present
	Text/EPG	Yes / No	Feature present / not present
	DS/PIP Tuner	Yes / No	Feature present / not present (only selectable if Dual Screen option is "on")
Teletext	Flash RAM	Yes / No	Flash RAM present / not present
	NexTView type	None	Feature not present
		Textguide only	Feature present, but only as text guide
		Nextview 2c3	Feature present, for countries that support NexTView
Display	Screen	Value "000"	42 inch PDP SDI
		Value "001"	50 inch PDP SDI
		Value "002"	42 inch PDP FHP
		Value "003"	30 inch LCD LPL
		Value "004"	37 inch LCD LPL
		Value "005"	42 inch LCD LPL
		Value "006"	32 inch LCD Sharp
		Value "007"	42 inch PDP SDI VGA
		Value "008"	37 inch PDP FHP
Video Repro	Feature box type	1050i/1250i	HD input
		Eagle 1B	"Eagle version 1B" present (Pixel Plus 1)
		Eagle 1C	"Eagle version 1C" present (Pixel Plus 2)
	Lightsensor	Yes / No	Feature present / not present
	3D Comb filter	Yes / No	Only selectable when Columbus is present
	Impr. Noise Red.	Yes / No	Only selectable when Columbus is present
	Pixel Plus Version	1	Standard PP: only selectable with Eagle 1C
		2	Improved PP: only selectable with Eagle 1C
	720p	Yes / No	Enable for high resolution displays
Source Selection	EXT3 1Fh (2003)	Yes / No	Not selectable
Audio Repro	Acoustic System	FTV Top	Cabinet design (xxPF9986 and xxPF9996 with NXT)
		Soft Wrap	Cabinet design (xxPF9956 and xxPF9966 stdrd)
		Wrap	Cabinet design (xxPF9956 and xxPF9966 stdrd)
		FTV2.3	Cabinet design (for future)
	AVL	On / Off	Enable / disable Automatic Volume Limiter

Menu-item	Subjects	Options	Description
Miscellaneous	Home Cinema	Yes / No	Model with / without Home Cinema Link (EU only)
	AmbiLight	Yes / No	Rear lighting feature present / not present
	Integrated RC	Yes / No	Control pheripheral equipment via TV IR receiver (EU only)
	Tuner type	UV1316 / TEDE9	Model with Philips tuner / Alps tuner
	P50 DVD menu line	Yes / No	Enable / disable DVD control via user menu with TV RC (EU only)
	Intelligent Lights	Yes / No	Proximity sensor present / not present
Option no.	Group 1		Group 1 option code overview (see set sticker)
	Group 2		Group 2 option code overview (see set sticker)

8.4.4 OPT. NO. (Option numbers)

Select this sub menu to set all options at once (expressed in two long strings of numbers).

Table 8-7 Option number overview

Model Number	12 NC	Options Group 1	Options Group 2
32PF9966/37	8670 000 20641	62692 08224 33040 04107	00016 01585 16512 49602
32PF9966/61	8670 000 20645	62948 08224 33104 04107	00024 01569 16512 49601
32PF9966/69	8670 000 20643	62948 08224 33104 04107	00016 01553 16512 49601
32PF9966/93	8670 000 20644	62948 08224 33104 04111	00016 01553 16512 49601
32PF9986/12	8670 000 20663	62948 40992 49488 04097	04118 01537 16480 49632
32PF9996/37	8670 000 20666	62948 08224 33040 04107	00016 01585 16512 49632
37PF9986/12	8670 000 20667	62948 40992 49488 04097	04118 01025 16480 03040
37PF9996/37	8670 000 20668	62948 08224 33040 04107	00016 01073 16512 03040
42PF9956/12	8670 000 20661	13668 40992 49472 04096	04118 01793 08288 11458
42PF9966/12	8670 000 20646	30180 40992 49472 04096	04118 00513 24672 11457
42PF9966/37	8670 000 20647	62692 08224 33040 04107	00016 00049 32896 11458
42PF9966/79	8670 000 20649	62948 08224 33104 04107	04112 00017 32896 11457
42PF9966/93	8670 000 20652	62948 08224 33104 04111	04112 00017 32896 11457
42PF9966/98	8670 000 20651	62948 08224 33104 04107	04112 00017 32896 11457
42PF9986/12	8670 000 20669	62948 40992 49488 04097	04118 01281 16480 03296
42PF9986/69	8670 000 20672	62948 08224 33104 04107	00016 01297 16512 03296
42PF9986/93	8670 000 20674	62948 08224 33104 04111	00016 01297 16512 03296
42PF9996/37	8670 000 20675	62948 08224 33040 04107	00016 01329 16512 03296
50PF9956/37	8670 000 20659	46436 08224 33024 04096	00016 00305 16512 11713
50PF9966/12	8670 000 20653	62948 40992 49472 04096	04118 00257 16480 11713
50PF9966/37	8670 000 20654	62692 08224 33040 04107	00016 00305 16512 11714
50PF9966/69	8670 000 20656	62948 08224 33104 04107	04112 00273 16512 11713
50PF9966/93	8670 000 20657	62948 08224 33104 04111	04112 00273 16512 11713
50PF9986/37	8670 000 20658	62948 08224 33040 04107	00016 00305 16512 11714

An option number (or "option byte") represents a number of different options. When you change these numbers directly, you can set all options very quickly. All options are controlled via eight option numbers.
When the EAROM is replaced, all options will require resetting. To be certain that the factory settings are reproduced exactly, you must set both option number lines. You can find the correct option numbers on a sticker inside the TV set.

Example: The options sticker gives the following option numbers:

- 62948 40992 49488 04097
- 04118 01537 16480 49632

The first line (group 1) indicates options 1 to 4, the second line (group 2) options 5 to 8.
Every 5-digit number represents 16 bits (so the maximum value will be 65536 if all options are set).
When all the correct options are set, the sum of the decimal values of each Option Byte (OB) will give the option number.
See next table for the option overview.

Table 8-8 Option overview

Byte	Bit (dec. value)	Subject	Options	Settings (in decimal values)	Remarks
1	0 (1)	Video Repro	Feauture Box Type	3= Eagle 1B, 4= Eagle 1C, 5= 1050i/1250i	
	1 (2)				
	2 (4)				
	3 (8)	Personal	Ambi Light Demo	0= Off, 8= On	
	4 (16)	Video Repro	Auto Scavem	0= No, 16= Yes	Only selectable for CRT sets.
	5 (32)		Improv. Noise Reduction	0= No, 32= Yes	Fixed to "Yes" in case Columbus is present
	6 (64)		Light Sensor	0= No, 64= Yes	
	7 (128)	Miscellaneous	Ambi Light	0= No, 128= Yes	
	8 (256)	Video Repro	Digital Option	0 (No)= Dig. Natural Motion (for PP1) or PixelPlus (for PP2), 256 (Yes)= PixelPlus (for PP1) or PixelPlus2 (for PP2)	This depends on the "Pixel Plus Version" option (see also Byte 1 - bit 14), and gives the info that is visible in the user menu.
	9 (512)		n.a.		
	10 (1024)	Source Selection	1152i	0= Off, 1024= On	
	11 (2048)	Video Repro	n.a.		
	12 (4096)		Signalling Bits	0= No, 4096= Yes	Fixed to: "Yes" in EU and AP-P, "No" for other versions.
	13 (8192)		3D Comb Filter	0= No (2D Comb), 8192= Yes (3D Comb)	
	14 (16384)		PP (Pixel Plus) Version	0= “1”, 16384= “2”	Only selectable when "Feature Box" option is "Eagle 1C". See also Byte 1- bit 8 "Digital Option".
	15 (32768)		720p	0= No, 32768= Yes	
2	0 (1)	Audio Repro	n.a.		
	1 (2)		Dolby Pro Logic	0= No, 2= Yes	
	2 (4)		Virtual Rear Speakers	0= No, 4= Yes	Fixed to: "Yes" for sets with Dolby Pro Logic.
	3 (8)		Cordless Rear Speakers	0= No, 8= Yes	Fixed to: "No" for all versions, except for EU.
	4 (16)		Dolby Digital	0= No, 16= Yes	When Dolby Digital is "Yes", the AVL (Byte 8 - bit 6) option must be "No".
	5 (32)		Virtual Dolby	0= No, 32= Yes	Fixed to: "No" in case the "Dolby Pro Logic" option (Byte 2 - Bit 1) unequals "none".
	6 (64)		Subwoofer	0= No Subwoofer present, 64= Subwoofer present.	
	7 (128)				
	8 (256)	Chassis/Region	Chassis	0= EM6, 256= EM5, 512 = EM3	FTx2.x= EM6
	9 (512)				
	10 (1024)				
	11 (2048)				
	12 (4096)	Teletext	n.a.		
	13 (8192)		Flash RAM	0= No, 8192= Yes	NexTView type 2C3 and 2 need a Flash RAM.
	14 (16384)		NexTView type	0= None, 16384= Textguide only, 32768= NexTView 2C3, 49152= NexTView 2	Only available for EU.
	15 (32768)				
3	0 (1)	n.a.	n.a.		
	1 (2)	n.a.	n.a.		
	2 (4)	n.a.	n.a.		
	3 (8)	n.a.	n.a.		
	4 (16)	Dual Screen	PIP/Dual Screen	0= No, 16= Yes	
	5 (32)		n.a.		
	6 (64)		TXT/EPG Dual Screen	0= No, 64= Yes.	Fixed to: "Off" for AP-N, US, and LA versions.
	7 (128)		n.a.		
	8 (256)	Display	CRT type (Aspect Ratio)	0= 4:3, 256= 16:9	
	9 (512)		Picture Rotation	0= No, 512= Yes	Only selectable for CRT sets.
	10 (1024)		Monitor	0= No, 1024= Yes	Reserved for Flat TV monitor.
	11 (2048)	Miscellaneous	Integrated Radio	0= No, 2048= Yes	
	12 (4096)		Stand Alone	0= No, 4096= Yes	Reserved for Flat TV monitor.
	13 (8192)		Integrated DVD	0= No, 8192= Yes	
	14 (16384)		Home Cinema	0= No, 16384= Yes	Fixed to: "No" in all versions except for EU.
	15 (32768)		Integraded RC	0= No, 32768= Yes	Fixed to: "No" in all versions except for EU.
4	0 (1)	Dual Screen	DS/PIP (Aux) Tuner	0= Aux Tuner not present, 1= Aux Tuner present	Only selectable in the EU version, provided the "PIP/Dual Screen" option is "Yes".
	1 (2)		DS/PIP (Aux) Tuner Type	0= UV1316, 2= TEDE9	
	2 (4)	Miscellaneous	38.0 (or China) IF	0= No, 4= Yes	Fixed to: "No" in all versions except for AP-P.
	3 (8)		Tuner Type	0= UV1316, 8= TEDE9	
	4 (16)	Teletext	n.a.		
	5 (32)		n.a.		
	6 (64)		n.a.		
	7 (128)		n.a.		
	8 (256)	Miscellaneous	Integrated Dig. Module	0= No, 256= Yes	
	9 (512)		Integrated HDD	0= No, 512= Yes	
	10 (1024)		n.a.		
	11 (2048)		n.a.		
	12 (4096)		Anti Aging	0= No, 4096= Yes	Fixed to: "Yes" for FTV.
	13 (8192)	Personal	DVD Door Lock	0= No, 8192= Yes	
	14 (16384)		n.a.		
	15 (32768)		n.a.		

Byte	Bit (dec. value)	Subject	Options	Settings (in decimal values)	Remarks
5	0 (1)	Personal	n.a.		
	1 (2)		Auto Store Mode	0= None, 2= PDC/VPS, 4= TXT Page, 6= PDC/VPS/TXT Page	Fixed to: "None" in the AP-N and US versions.
	2 (4)				
	3 (8)		2CS Korea	0= BTSC, 8= Korean Stereo	As the MSP can not automatically detect if Korean stereo (2CS) or BTSC is transmitted, this option is needed to tell the MSP what detection should be done.
	4 (16)		Blue (or Picture) Mute	0= No, 16 = Yes	
	5 (32)		n.a.		
	6 (64)		Virgin Mode	0= No, 64= Yes	
	7 (128)	Miscellaneous	Hotel Mode	0= No, 128= Yes	
	8 (256)	Personal	Flex TV Demo	0= No, 256= Yes	
	9 (512)		n.a.		
	10 (1024)		n.a.		
	11 (2048)		n.a.		
	12 (4096)		TXT Preference	0= Top, 4096= FLOF	Only available in the EU version.
	13 (8192)		n.a.		
	14 (16384)		n.a.		
	15 (32768)		n.a.		
6	0 (1)	Miscellaneous	P50 DVD Menu Line	0= No, 1= Yes	Fixed to: "No" in all versions except for EU.
	1 (2)		n.a.		
	2 (4)		n.a.		
	3 (8)		n.a.		
	4 (16)	Chassis/Region	Region	0= EU, 16= AP-P, 32= AP-N, 48= US, 64= Latam, 80= Australia	
	5 (32)				
	6 (64)				
	7 (128)				
	8 (256)	Display	Screen	"000" (0)= 42-inch PDP (SDI), "001" (256)= 50-inch PDP (SDI), "002" (512)= 42-inch PDP (FHP), "003" (768)= 30-inch LCD (LPL), , "004" (1024)= 37-inch LCD (LPL), "005" (1280)= 42-inch LCD (LPL), "006" (1536)= 32-inch LCD (Sharp), "007" (1792)= 42-inch PDP (SDI) VGA, "008" (2048)= 37-inch PDP (FHP).	Fixed to "0" in case of CRT.
	9 (512)				
	10 (1024)				
	11 (2048)				
	12 (4096)				
	13 (8192)				
	14 (16384)				
	15 (32768)				
7	0 (1)	Source Selection	EXT4 1fH	0= No, 1= Yes	
	1 (2)		EXT1 2fH	0= No, 2= Yes	
	2 (4)		n.a.		
	3 (8)		n.a.		
	4 (16)		n.a.		
	5 (32)		EXT3 1fH	0= No, 32= Yes	
	6 (64)		DVI/VGA	0= No, 64= Yes	
	7 (128)		HDMI (Europe)	0= No, 128= Yes	
	8 (256)		AV3 1fH	0= No, 256= Yes	
	9 (512)		AV1 2fH	0= No, 512= Yes	
	10 (1024)		AV2 2fH	0= No, 1024= Yes	
	11 (2048)		n.a.		
	12 (4096)		n.a.		
	13 (8192)		n.a.		
	14 (16384)		n.a.		
	15 (32768)		HDMI (Non- Europe)	0= No, 32768= Yes	
8	0 (1)	Audio Repro	Acoustic System	0= FTV-Top (499), 1= Soft Wrap (496, 498), 2= Wrap (496, 498), 3= FTV2.3 (505), 4= FL9 Monitor (n.a.), 5= FL10 (n.a.), 6= FL11 or FL11-upgr. (380, 382, 406, 425, 426, 534), 7= FL12 (296, 305, 395, 408, 428, 444), 8= FL14 (n.a.), 9= PV02 (462), 10= FL13A (456), 11= Soft Design Line (336, 383), 12= Tech Design Line (419), 14= FL13B (456), 15= Others	Used for setting dynamic audio parameters. Between brackets the styling numbers are mentioned as listed in the quarterly Product Survey.
	1 (2)				
	2 (4)				
	3 (8)				
	4 (16)	Miscellaneous	n.a.		
	5 (32)		Intelligent Lights	0= No, 32= Yes	
	6 (64)	Audio Repro	AVL	0= No, 64= Yes	Switch to "No" when Dolby Digital is present.
	7 (128)	???	1080i Screen	0= 2fH path, 128= 3fH path	
	8 (256)	Display	CRT Size	0= 28", 256= 32", 512= 36" MEC, 768= 29", 1024= 34", 1280= 38", 1536= 28" Mk2, 1792= 36" PH, 2048= 32" MEC, 2304= 32" PH, 2560= 30", 2816= 37", 3072= 42", 3328= 50", 3840= Others	
	9 (512)				
	10 (1024)				
	11 (2048)				
	12 (4096)		Anti Moire Filter	0= No, 4096= Yes	Only for CRT
	13 (8192)		Display Type	0= LCD (LPL), 8192= PDP, 16384= CRT, 24576= LCoS, 32768= PTV, 40960= LCD (AUO), 49152= LCD (Sharp)	
	14 (16384)				
	15 (32768)				

9. Circuit Descriptions, Abbreviation List, and IC Data Sheets

Index of this chapter:

9.1 Introduction
9.2 Power Supply Unit
9.3 Video
9.4 Synchronisation
9.5 Audio
9.6 Control
9.7 Proximity Sensor (if present)
9.8 Ambient Light (if present)
9.9 Software Upgrading
9.10 Abbreviation list
9.11 IC Data Sheets

Note:

- Only **new** (not recently published) circuits are described here. For the other circuit descriptions, see a.o. the FMxx, FTP1.x, and/or FTL2.x manuals.
- In the following text, the model year 2003 refers to the FTP1.x chassis, while the model year 2004 refers to the new FTP2.x chassis.
- Figures can deviate slightly from the actual situation, due to different set executions.
- For a good understanding of the following circuit descriptions, please use the wiring, block and circuit diagrams. Where necessary, you will find a separate drawing for clarification.

9.1 Introduction

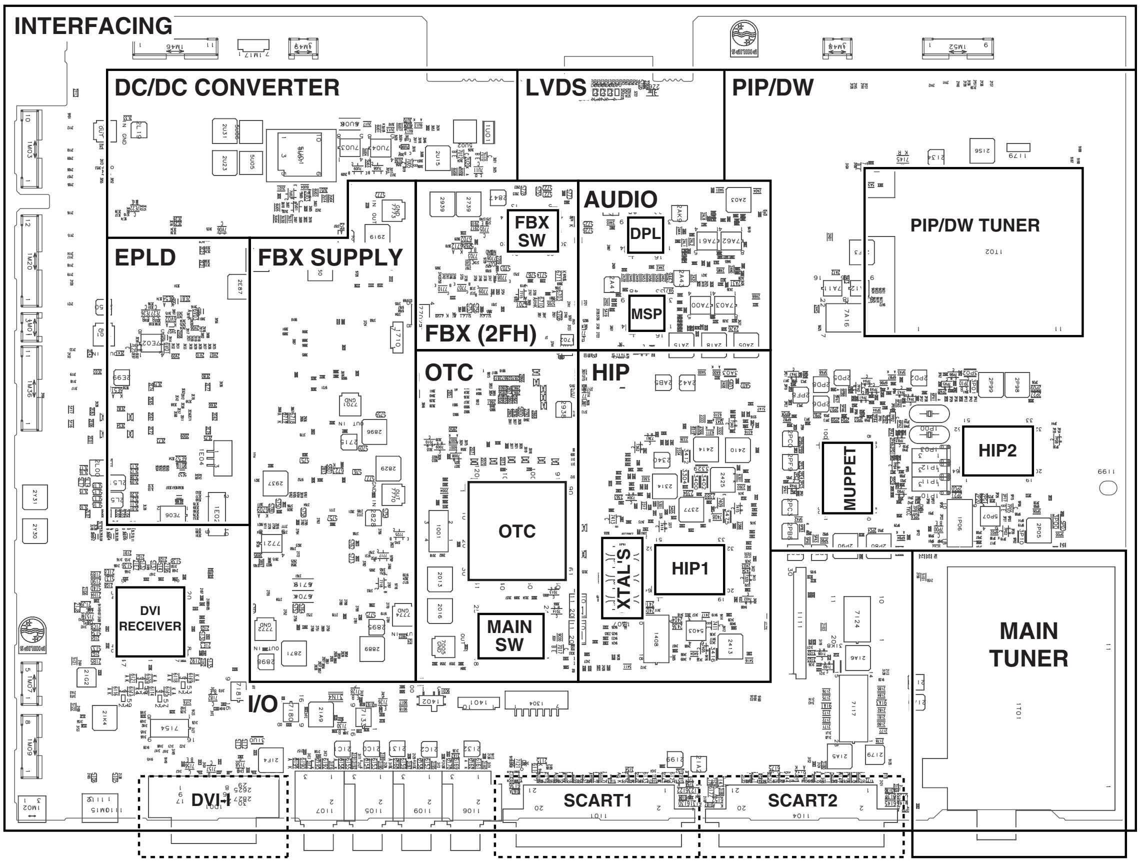
This chassis contains, compared to its predecessor, the following **new** features/components:

- **New Small Signal Board** (SSB) with lower height due to a.o. flat mounted tuners. This board is completely shielded (i.s.o. only the FBX).
- **FEM** (Falconic Embedded Memories): this is a new Falconic IC with internal Field memories and jagged line removal feature.
- **Improved 2D/3D Comb filter**: The new key components are Columbus and SDRAM. When SDRAM is used, a 3D comb filter (or temporal comb filtering) is possible. Without SDRAM, only 2D comb filtering (or spatial comb filtering) is possible. This is improved with respect to the previous 2D comb filter.
- **Improved noise reduction**: This is a second function of the Columbus and SDRAM. Noise reduction is possible without SDRAM (2D) and with SDRAM (3D).
- **Pixel Plus 2**: Eagle 1B is replaced by Eagle 1C.
  - Algorithms for Horizontal LTI and Vertical LTI are improved.
  - "Thin Line Control" as part of the sharpness control.
  - "Face Depending Peaking" should allow less sharpness in faces different from the rest of the picture. This could be used to anti age faces versus the rest of the picture.
  - "Vivid Colours 1" will result in more saturated colours.
  - The range/amount of "Blue Stretch" is extended.
  - More steps of "Green Enhancement".
  - Improved "Colour Dependent Sharpness".
  - Increased range of skin gain and skin tone.
- **Proximity sensor**: to detect motion when the customer is approaching the set, and then to light up the LEDs on the set for 6 s (detection area is 1.5 - 2 m).
- **Improved/new AutoTV functions**: AutoTV 2004 has some new hardware configurations. Applying an LCD panel requires to have contrast reserve and backlight regulation. Applying a PDP panel requires having contrast reserve as well (no backlight regulation). The Eagle 1C is detected automatically. “Columbus improved noise reduction” is used when the Columbus is present.
- **Ambient Light**: To control lamps at the rear of the TV with respect to the measured ambient light level from the light sensor or the picture content, a control output from AutoTV has been foreseen.
- **DVI input** for Europe, **HDMI input** for NAFTA and AP.

The chassis consists of a full sized SSB, a Power Supply, and some smaller PWBs for Audio, I/O, and Control functions. The main functionalities are:

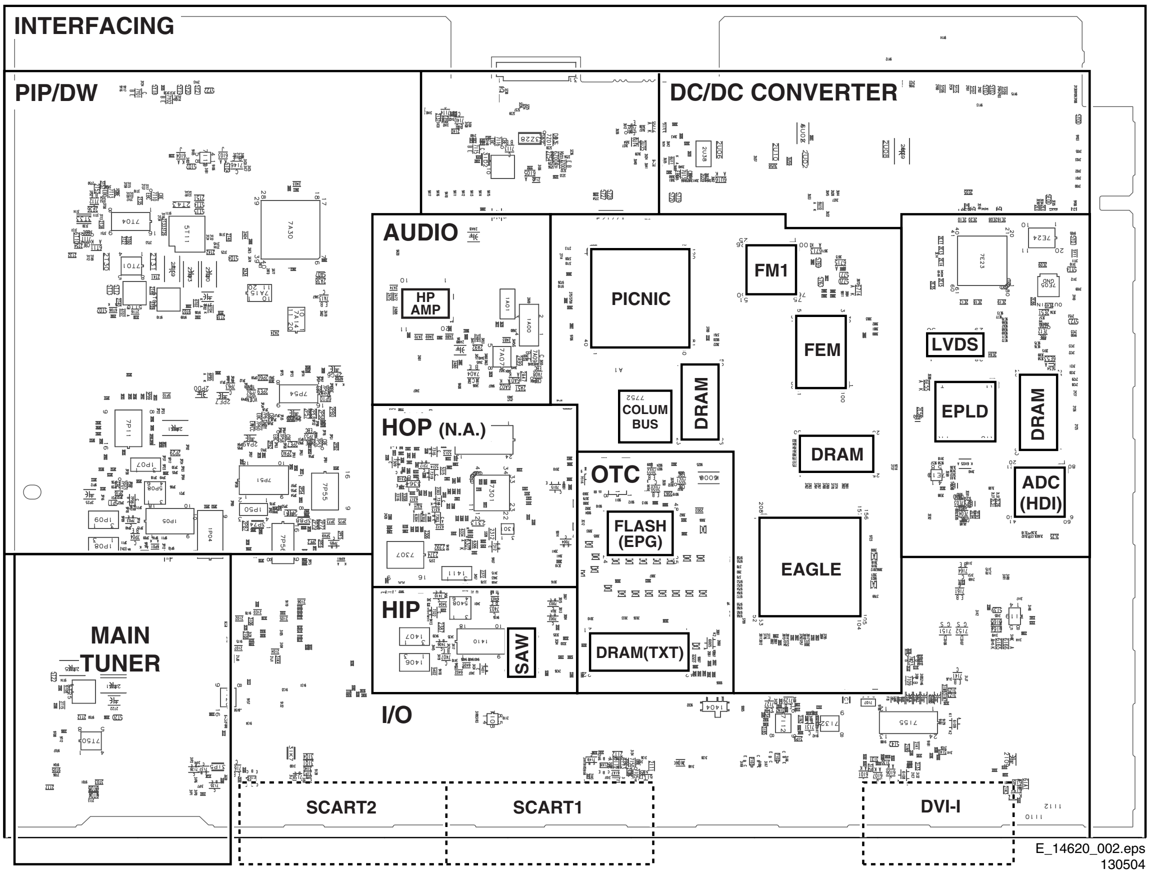
- **Power Supply**:
  - For **FHP** displays, this is an LLC power supply, based on the one used in the earlier plasma monitors (FMxx chassis). This supply (single sided) is built up very conventional, with hardly any surface mounted components on the copper side.
  - For **SDI** displays, this is a "black box" for Service (board/module swap).
- **SSB**: Core TV functionalities, being TXT/control, video and audio decoding, feature box, video featuring, and sync/geometry control. The SSB is a high tech module (four layer, 2 sides reflow technology, full SMC) with very high component density and full shielding for EMC-reasons. Despite this, it is designed in such a way, that repair on component level is possible. To achieve this, attention was paid to:
  - Clearance around surface mounted ICs (for replacing).
  - Detailed diagnostics and fault finding is possible via ComPair.
  - Software upgrading (only for main software) is possible via ComPair.

On the drawings (next page), it is indicated where all the functional cells are located on the SSB (mind you that this is just an indication):


INTERFACING
DC/DC CONVERTER
LVDS
PIP/DW
PIP/DW TUNER
EPLD
FBX SUPPLY
FBX SW
AUDIO
DPL
MSP
FBX (2FH)
OTC
HIP
OTC
HIP2
MUPPET
XTAL'S
HIP1
DVI RECEIVER
MAIN SW
MAIN TUNER
I/O
DVI-I
SCART1
SCART2

E_14620_012.eps
130504

Figure 9-1 SSB top view


INTERFACING
PIP/DW
DC/DC CONVERTER
AUDIO
HP AMP
PICNIC
FM1
FEM
LVDS
EPLD
DRAM
COLUM BUS
DRAM
DRAM
ADC (HDI)
HOP (N.A.)
OTC
FLASH (EPG)
EAGLE
HIP
SAW
DRAM(TXT)
MAIN TUNER
I/O
SCART2
SCART1
DVI-I

E_14620_002.eps
130504

Figure 9-2 SSB bottom view

9.2 Power Supply Unit

9.2.1 Power Supply Samsung PDP (SDI)

General

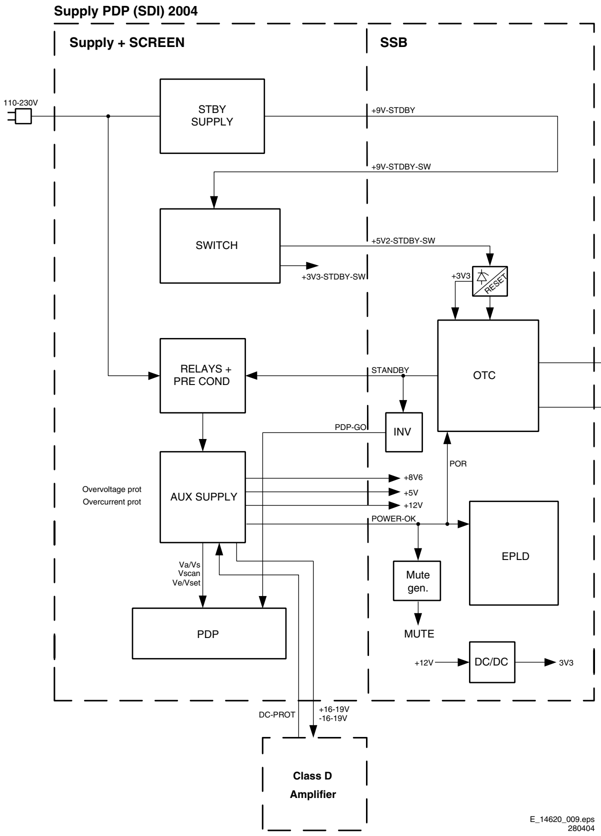

Supply PDP (SDI) 2004
Supply + SCREEN
SSB
110-230V
STBY SUPPLY
+9V-STDBY
+9V-STDBY-SW
SWITCH
+5V2-STDBY-SW
+3V3-STDBY-SW
+3V3
RESET
RELAYS + PRE COND
STANDBY
OTC
TACT switch
PDP-GO
INV
Overvoltage prot
Overcurrent prot
AUX SUPPLY
+8V6
+5V
+12V
POR
POWER-OK
EPLD
Va/Vs
Vscan
Ve/Vset
Mute gen.
PDP
MUTE
+12V
DC/DC
3V3
DC-PROT
+16-19V
-16-19V
Class D Amplifier
E_14620_009.eps
280404

Figure 9-3 Block diagram PDP (SDI) power supply

The Power Supply of SDI PDPs is a buy-in PSU. This Power Supply is divided in 2 parts:

- One PSU for the PDP itself (incl. the Stand-by Supply).
- One "sub" PSU for the SSB.

For Service the Power Supply is a black box. When defective (this can be traced via error-codes in the error buffer, or by strange phenomena), a new panel must be ordered and after receipt, the defective panel must be send for repair.

Stand-by Supply

The Stand-by Supply is directly connected to the mains, there is no mains switch.

- US: the mains input has a polarisation that is requested for the USA together with a polarised mains cord. The neutral is connected to the mains neutral.
- EU/AP: A non-polarised cord is used for these regions.

Changes in 2004:
There is no ON/OFF switch, the +9V_STDBY is always connected to the switching part.

Switch

The +9V_STBDBY_SW is routed to the “switch” part in the supply. This part generates the 5V2_STDBY_SW to the OTC supply (which generates its own reset).
The +3V3_STDBY_SW is not used on the SSB, it is only used for the CPU of the plasma panel.

Relays and Pre-conditioner

If the STANDBY bit in the OTC is zero, the STANDBY line is “low”, and the relay in the supply connects the mains voltage to the AUX supply.
For the US region, the mains voltage is doubled.

The OTC delivers a PDP-GO signal to the PDP when the set is not in stand-by.

Aux Supply

This is an LLC supply that delivers the Va, Vs, Vscan, Ve, and Vset directly to the PDP.

Changes in 2004:

- The voltages +12V, +8V6, +5V, and the tuner supply are derived from the PDP supply. The +3V3 is generated by the DC/DC converter on the SSB.
- The AUX supply delivers a POWER_OK signal to the EPLD (is not used by the EPLD). This signal is used as POR signal to prevent audible plops, and by the OTC to guarantee a proper “switch off” (via the mains plug).
- The +V and -Vsound are routed to the class D audio amplifier. The DC_PROT signal from this amplifier goes directly to the supply and causes a hardware protection.
- The AUX supply has its own over-voltage and over-current protection.

9.2.2 Power Supply Fujitsu PDP (FHP)

Note: In the following text, the model year 2003 refers to the FTP1.x chassis, while the model year 2004 refers to the new FTP2.x chassis.

General

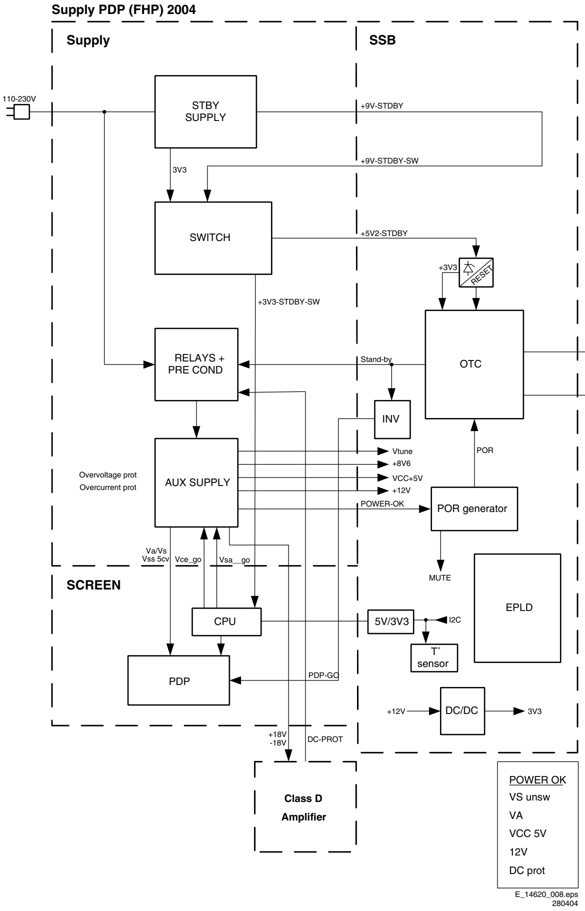

Supply PDP (FHP) 2004
Supply
SSB
110-230V
STBY SUPPLY
+9V-STDBY
+9V-STDBY-SW
3V3
SWITCH
+5V2-STDBY
+3V3
RESET
+3V3-STDBY-SW
RELAYS + PRE COND
Stand-by
OTC
TACT switch
INV
Overvoltage prot
Overcurrent prot
AUX SUPPLY
Vtune
+8V6
VCC+5V
+12V
POR
POWER-OK
POR generator
Va/Vs
Vss 5cv
Vce_go
Vsa__go
MUTE
SCREEN
EPLD
CPU
5V/3V3
I2C
T°
sensor
PDP
PDP-GO
+12V
DC/DC
3V3
+18V
-18V
DC-PROT
Class D Amplifier
POWER OK
VS unsw
VA
VCC 5V
12V
DC prot
E_14620_008.eps
280404

Figure 9-4 Block diagram PDP (FHP) power supply

Changes in 2004:

- Switched 3V3 and 5 V on Stand-by Supply not necessary any more: a tact switch replaces the ON/OFF switch.
- No I^{2}C I/O expander any more for fault reading.
- No fan control any more.
- Over-voltage protection omitted on the 12 V supply.
- 3V3 protection becomes 12V protection.

- LLC resonant supply: 9 V becomes 30 V for the 12 V down converter. Extra filter added for detecting low frequency.
- Pre-conditioner: extra protection for mains dips.
- 3V3 down converter becomes 12V down converter for Ambilight and DC/DC converter on the SSB.
- Sound supply slightly different: more power, higher voltage.
- Minor modifications on the Vcc control IC TEA1507.
- Va converter: no current detection any more towards the PDP panel.
- The OTC is always powered.
- A special STANDBY situation is created called the OFF state.

Differences with the SDI PSU:

- Combined MAIN and STANDBY supply, with preconditioner.
- The sound supply is +18V and -18V.
- The display CPU gives a Vce_go and Vsa_go to start-up the Aux supply.The Power_OK line monitors the Vs_unswitched, Va, Vcc_5V, 12V, and DC_PROT. This Power_OK is combined via an AND port with the 9V_STDBY_SW and this generates the POR to the OTC.
- A temperature sensor measures the temperature of the SSB. The maximum power is decreased when the temperature becomes too high.
- In SEMI-STANDBY and ON, the Ambient Light is powered.

Table 9-1 PSU output voltage overview (for FHP plasma panel)

Name of outp. voltages	Destination of outp. voltages	Usage of output voltages	Nominal Value	Nominal output current
Vs (or sustain voltage)	Plasma display	For the actual light generation of the display, consumption is correlated to light output level. (With a dark screen there is still consumption)	75 V to 90 V (adjusted per display)	3.0 A typical, 20 A peak
Va (or address voltage)	Plasma display	For the addressing of the pixels of the display, consumption is correlated to variation in light output between adjacent pixels.	50 V to 65 V (adjusted per display)	3.5 A max, 8 A peak
Vcc	Plasma display and SSB	Powers the logic electronics on the PDP and digital circuits on the SSB	5.1 V	3.0 A typical, 5.0 A peak
Vpr or 3V3*	Plasma display	For the logic control board (micro processor)	3.3 V	50 mA nominal
5V2 *	Small Signal Board	For the micro processor and related circuits	5.2 V	500 mA nominal, 80 mA in stand-by
9V *	Only used inside the PSU	For the two relays	9 V	100 mA nominal
25V_HOT	Only used inside the PSU	For the controller of the LLC converter	25 V	
12V	Small Signal Board and ambient light inverter board	Used by DC-DC converters on the SSB to generate lower voltages, the consumption by the inverter board is correlated to the ambient light levels.	12 V	2.8 A with ambient lighting on maximum (800mA for SSB, 2 A max for ambient light)
8V6	Small Signal Board	Used by analog chips on the SSB	8.5 V	0.55 A

Table 9-2 PSU control signal overview (for FHP plasma panel)

Name of signal	Destination or origin	Type of signal	Function
Vcego	From Display to PSU	Two states H or L, H is active (3V3 levels)	Enables the LLC and Vcc converter to start up, only the Vcc (5 V) is applied to the display
Vsago	From Display to PSU	Two states H or L, H is active (3V3 levels)	Enables the Va converter to start up, the Vs voltage and Va voltages are applied to the display
Stand-by	From SSB to PSU	Two states H or L, “high” is active (H is stand-by) (3V3 levels)	When “high” the mains relays are opened so only the stand-by converter remains active. In a playing tv set this signal is low.
Vrs	From Display to PSU	Analogue signal, increasing Vrs means increasing Vs (0..2 V)	Adjusts the value of the Vs output voltage, the display measures the Vs value and adjusts it to the optimal value which is different for every individual display.
Vra	From Display to PSU	Analog signal, increasing Vra means increasing Va (0.2 V)	Adjusts the value of the Va output voltage, the display measures the Va value and adjusts it to the optimal value which is different for every individual display.
Power_OK	From PSU to SSB	Two states H or L, “high” is active (3V3 levels)	Becomes high if Va, Vs, Vcc, 12 V, 8V6 are within their limits so if these outputs are working normal
DC_prot	From audio power amplifier board to PSU	Two states H or L, “high” is active	In case the DC level on the loudspeakers exceed the limit, the sound amplifier panel puts this signal line high.

Power States

There are four different power states. Their characteristics are summarised in the "Power states" table.

Note:

- All regions use a red LED for STANDBY and a blue LED for ON. Otherwise, there is no visible difference between OFF and STANDBY.
- In SEMI-STANDBY coming from STANDBY, the blue LED is "on",
- In SEMI-STANDBY coming from ON, the red LED is "on".

Table 9-3 Power states

Power States	Switch	PDP
OUT (Mains cord disconnected)	X	No power.
OFF	OFF	Stand-by supply is working. Main supply not working. 2003: OTC is not powered. 2004: OTC is powered and is in low power stand-by. No LED is "on". No P50 or EPG (Europe). Proximity sensor is "off". No time extraction started. No ambient light.RC6 ignored.
STAND BY (1)	ON	Stand-by supply is working. Red LED is "on".
SEMI STAND BY (Going to ON)	ON	Stand-by supply is working. Main supply is working. PDP is "on" and blanked. EPG loading and P50 recording are possible (Europe). Time extraction. 2003: Red and Green LEDs are "on". 2004: Blue LED is "on".
ON	ON	The set is working. 2003: Green LED is "on". 2004: Blue LED is "on".
SEMI STAND BY (Coming from ON)	ON	Stand-by supply is working. Main supply is working. PDP is "on" and blanked. EPG loading and P50 recording are possible (Europe). 2003: Red and Green LEDs are "on". 2004: Red LED is "on".
SEMI STAND BY AMBIENT LIGHT ON	ON	Stand-by supply is working. Main supply is working. PDP is "on" and blanked. Red LED is "on".

(1) Stand-by, entered via the remote or via a protection. A special case of STANDBY state is the SERVICE STANDBY STATE. A service engineer with a "ComPair/Dealer Service Tool" can enter it. In this state, an IR LED can be used for Diagnostics (for reading error codes). It is the starting condition for the “stepwise start-up".

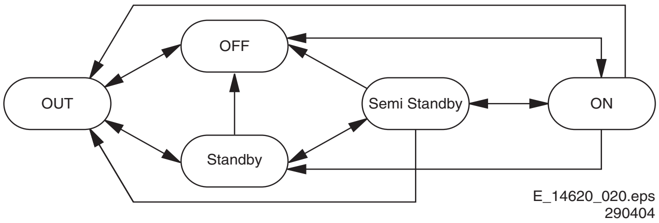


Figure 9-5 Power state diagram

- **OUT:** The set is OUT when the mains cord is disconnected. When the mains cord is connected, the set goes to OFF or to STANDBY state, depending on the last status in the NVM. From all states, the set can be set to the OUT state by disconnecting the mains cord or by a mains interruption.
- **OFF:** In the OFF state, the OTC is powered but is in low power STANDBY state. No LEDs are "on", RC6 is ignored, no EPG or P50 is possible, Proximity is set to "off", time extraction is not started (if it was done before this state, the clock stays running). The tact switch can only change this state; the set goes via SEMI-STANDBY to ON. From all states, we can go to the OFF state by the tact switch.
- **STANDBY:** The set is in STANDBY if the STANDBY bit is set. This state can change with the RC6 "on" command, for EPG loading, P50 recording, for time extraction, or for ambient light. The next state is SEMI-STANDBY and to ON if the STANDBY bit is not set.
- **SEMI-STANDBY:** State between STANDBY or OFF and ON state. All supply voltages are present, but the screen is blanked.
- **ON:** set is ON.

POR detection

Situation in 2003:

- After all the supply lines are available, the supply generates a POWER_OK signal (active "low"). This signal is used as POR to mute the sound as long as this line is not "low". The POR is inverted (called ROP) and is used to mute the sound as long as the POWER_OK is "low".

Changes in 2004:

- A POK (Power OK) signal is generated by the supply when all the voltages are within specs. This is used as POR_FLASH for the OTC.
- For "anti-plop", a transistor generates a signal. The collector is via a resistor connected to the +5V2, the base is connected to the POK signal. The collector signal follows the 5V2 until the POK is high. The transistor conducts, the collector becomes "low", and the sound will be de-muted.

Start-up sequence

1. When the mains is connected, the stand-by supply delivers 5V2 to the Small Signal Board, 3V3 to the display control electronics, 20 V for the Vs converter (25VHOT), and 9 V for the relays.
2. When the TV set goes from STANDBY/OFF to ON mode, the STANDBY signal line is made "low" by the SSB. Relay 1450 closes, sending the mains to the pre-conditioner. The pre-conditioner starts up and delivers 390 V_{DC}.
3. The SSB has also a signal line running towards the display electronics called CPUGO, it is part of the LVDS cable. This signal is driven by the STANDBY line via a simple inverter. So CPUGO is made "high", which retrieves the display out of its low power mode.
4. The OTC on the SSB sends an I^{2}C command to the display in order to start up. The display in turn makes the VCEGO signal line towards the power supply "high" after it has verified that the Vcc supply voltage is indeed still "low".
5. The Vs converter, which was already supplied with 400 V by the pre-conditioner and with around 20 V by the stand-by supply (25VHOT), is enabled by optocoupler 7003. It generates 65 V at the Vs_unsw output and around 24 V at the 30 V auxiliary output. Further the Vcc converter is started up delivering 5.1 V typical to the display. Also the 12 V converter starts up.
6. The display monitors the Vcc voltage. On condition Vcc becomes "high" and Vs and Va are still "low", it applies the analogue control voltages Vrs and Vra to the supply and makes VSAGO high.
7. The display monitors Va and Vs, it waits 5 seconds for Va to rise above 29 V and Vs to rise above 69 V. If successful, the power supply is fully started up. If the 5 seconds run out, the display shuts down and retries the procedure from the beginning.

9.3 Video

For a detailed description of the Feature Box (PICNIC, Columbus, FEM, and Eagle 1C), see the EM5.3 Service Manual.

9.4 Synchronisation

See the FTL13 manual for a (more) detailed description.

9.5 Audio

See the FTL13 manual for a (more) detailed description.

9.6 Control

See the FTL13 manual for a (more) detailed description.

9.7 Proximity Sensor (if present)

See the FTL2.1 manual for a (more) detailed description.

9.8 Ambient Light (if present)

See the FTL2.1 manual for a (more) detailed description.

9.9 Software Upgrading

In this chassis, you can **upgrade** the main software via ComPair. This offers the possibility, to replace the entire SW image without having to remove the flash-memory from its socket. You can find more information on how this procedure works in the ComPair file. It is possible that not all sets are equipped with the hardware, needed to make software upgrading possible.
To speed up the programming process, the firmware of the ComPair interface can be upgraded. See Chapter "Service Modes ..."; paragraph "ComPair" - "How To Order" for the order number.

See the FTL13 manual for a (more) detailed description.

9.10 Abbreviation list

1080i	1080 visible lines, interlaced
1080p	1080 visible lines, progressive scan
2DNR	Spatial (2D) Noise Reduction
3DNR	Temporal (3D) Noise Reduction
AARA	Automatic Aspect Ratio Adaptation: algorithm that adapts aspect ratio to remove horizontal black bars; keeping up the original aspect ratio
ACI	Automatic Channel Installation: algorithm that installs TV sets directly from cable network by means of a predefined TXT page
ADC	Analogue to Digital Converter
AFC	Automatic Frequency Control: control signal used to tune to the correct frequency
AGC	Automatic Gain Control: algorithm that controls the video input of the feature-box
AM	Amplitude Modulation
ANR	Automatic Noise Reduction: one of the algorithms of Auto TV
AR	Aspect Ratio: 4 by 3 or 16 by 9
Artistic	See OTC 2.5: main processor
ASF	Auto Screen Fit: algorithm that adapts aspect ratio to remove horizontal black bars but without throwing away video information
ATV	See Auto TV
AUDIO_C	Audio Centre
AUDIO_L	Audio Left
AUDIO_R	Audio Right
AUDIO_SL	Audio Surround Left
AUDIO-SR	Audio surround right
AUDIO_SW	Audio Sub woofer
Auto TV	A hardware and software control system that measures picture content, and adapts image parameters in a dynamic way
B/G	Monochrome TV system. Sound carrier distance is 5.5 MHz. B= VHF-band, G= UHF-band
B-SC1-IN	Blue SCART1 in
B-SC2-IN	Blue SCART2 in
B-TXT	Blue teletext
CL	Constant Level: audio output to connect with an external amplifier
ComPair	Computer aided rePair
CRT	Cathode Ray Tube or picture tube
CSM	Customer Service Mode
CTI	Colour Transient Improvement: manipulates steepness of chroma transients
CVBS	Composite Video Blanking and Synchronisation
CVBS-TER	CVBS terrestrial
COLUMBUS	COLour LUMinance Baseband Universal Subsystem. IC performing noise reduction and 2D/3D comb filtering
DAC	Digital to Analogue Converter
DBE	Dynamic Bass Enhancement: extra low frequency amplification
DDC	Display Data Channel; is a part of the "Plug and Play" feature
DFU	Direction For Use: description for the end user
D/K	Monochrome TV system. Sound carrier distance is 6.5 MHz. D= VHF-band, K= UHF-band
DNR	Digital Noise Reduction: noise reduction feature of the box

DPL	Dolby ProLogic
DSP	Digital Signal Processing
DST	Dealer Service Tool: special remote control designed for dealers to enter e.g. service mode
DVD	Digital Versatile Disc
DVI(-d)(-i)	Digital Visual Interface (d= digital only) (i= integrated); a digital video interface to a display, designed to replace the analogue YPbPr or RGB interface
Eagle	Feature box IC performing peaking, zooming and sub pixel LTI in both horizontal and vertical direction, CTI and other colour features
EDID	Extended Display Identification Data (VESA standard)
EEPROM	Electrically Erasable and Programmable Read Only Memory
EHT	Extra High Tension
EPG	Electronic Program Guide: system used by broadcasters to transmit TV guide information (= NexTView)
EPLD	Erasable Programmable Logic Device
EU	EUrope
EXT	External (source), entering the set via SCART or via cinches
FALCONIC	SAA4992H, Feature Box IC performing Digital Natural Motion, 3DNR, and vertical zoom and vertical peaking
FBL	Fast Blanking: DC signal accompanying RGB signals
FBL-PIP	The fast blanking signal for PIP
FBL-TXT	The fast blanking signal for TXT. It has a higher priority than FBL-PIP
FBX	Feature Box: part of small signal / separate module which contains 100 Hz processing, extra featuring and AutoTV algorithms (FBX6= based on PICNIC, FBX7= based on PICNIC and Eagle)
FDS	Full Dual Screen
FEM	Falconic Embedded Memory; IC (SAA4998H) that is the successor of the SAA4993H with jagged line removal and embedded memory
FHP	Fujitsu Hitachi Plasma display Ltd.
FLOF	Full Level One Features, TXT standard
FLASH	Flash memory
FM	Field Memory or Frequency Modulation
G-TXT	Green teletext
GND-DRIVE	A separate ground for the line drive towards the line driver
HA	Horizontal Acquisition: horizontal sync pulse coming out of the HIP
HD at HOME	A signal from the OTC, to switch the HOP to the Pixel Plus standard (75 Hz frame)
HIP	High-end video Input Processor (TDA9320): video and chroma decoder of EM5E
HOP	High-end video Output Processor (TDA9330): video, sync, and geometry controller of EM5E
HP	Head phone
I	Monochrome TV system. Sound carrier distance is 6.0 MHz. VHF- and UHF-band
Interlaced	Scan mode where two fields are used to form one frame. Each field contains half the number of the total amount of lines. The fields are written in 'pairs', causing line flicker

I/O	Input/Output
I^{2}C	Inter IC bus (also called IIC)
IF	Intermediate Frequency
Interlaced	Scan mode where two fields are used to form one frame. Each field contains half the number of the total amount of lines. The fields are written in "pairs", causing line flicker
Last Status	The settings last chosen by the customer, read, and stored in RAM or in the NVM. They are called at start-up of the set to configure it according the customers wishes
LCD	Liquid Crystal Display
LPL	LG-Philips LCD
LED	Light Emitting Diode
L/L’	Monochrome TV system. Sound carrier distance is 6.5 MHz. L' is Band I, L is all bands except for Band I
LNA	Low Noise Adapter
LORE	LOcal REgression based noise reduction
LSP	Large signal panel
LVDS	Low Voltage Differential Signalling; Data transmission system for high speed and low EMI communication
M/N	Monochrome TV system. Sound carrier distance is 4.5 MHz. M= 525 lines @ 60 Hz, N= 625 lines @ 50 Hz
MSP	Multi-standard Sound Processor: ITT sound decoder of EM5E
MUTE	Mute-Line
NC	Not Connected
NICAM	Near Instantaneously Companded Audio Multiplexing; This is a digital sound system, mainly used in Europe
NTSC	National Television Standard Committee; Colour system mainly used in North America and Japan. Colour carrier NTSC M/N= 3.579545 MHz, NTSC 4.43= 4.433619 MHz (this is a VCR norm, it is not transmitted off-air)
NVM	Non Volatile Memory: IC containing TV related data e.g. alignments
O/C	Open Circuit
ON/OFF LED	On/Off control signal for the LED
OSD	On Screen Display
OTC	On screen display Teletext and Control; also named Artistic (SAA5800)
P50	Project 50 communication: protocol between TV and peripherals
PAL	Phase Alternating Line; Colour system mainly used in West Europe (colour carrier= 4.433619 MHz) and South America (colour carrier PAL M= 3.575612 MHz and PAL N= 3.582056 MHz)
PCB	Printed Circuit Board
PDP	Plasma Display Panel
PFC	Power Factor Corrector (or Pre-conditioner)
PICNIC	Peripheral Integrated Combined Network IC (SAA4978): main IC for 100 Hz featuring and feature processing
PIP	Picture In Picture
PLL	Phase Locked Loop; Used for e.g. FST tuning systems. The customer can directly provide the desired frequency
POR	Power On Reset; Signal to reset the µP

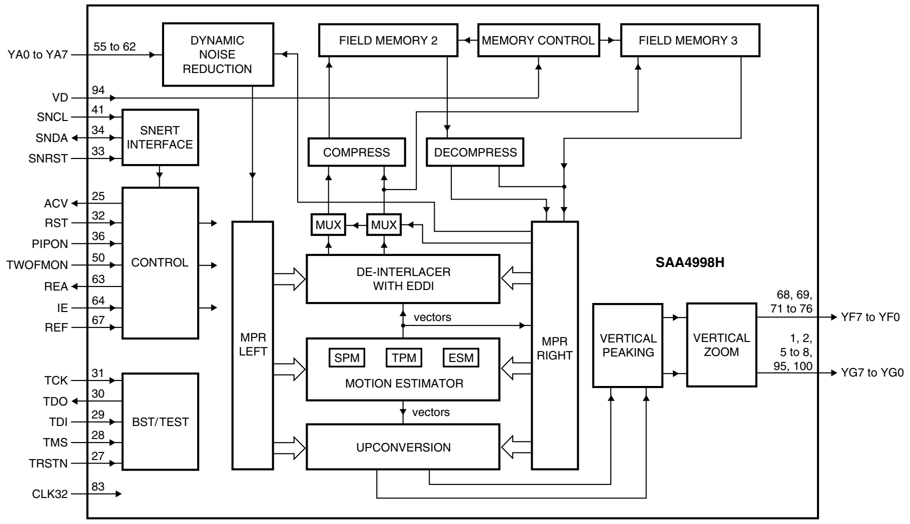
Progressive Scan	Scan mode where all scan lines are displayed in one frame at the same time, creating a double vertical resolution.
PSU	Power Supply Unit
PWB	Printed Wiring Board
RAM	Random Access Memory
R-TXT	Red teletext
RC	Remote Control
RC5 / RC6	Signal protocol from the remote control receiver
RESET	Reset signal
RGB	Red, Green, and Blue colour space; The primary colour signals for TV. By mixing levels of R, G, and B, all colours (Y/C) are reproduced
RGBHV	Red, Green, Blue, Horizontal sync, and Vertical sync
ROM	Read Only Memory
SAM	Service Alignment Mode
S/C	Short Circuit
SCL-F	Clock signal on fast I^{2}C bus
SD	Standard Definition
SDA-F	Data signal on fast I^{2}C bus
SDI	Samsung Display Industry
SECAM	SÉquence Couleur Avec Mémoire; Colour system mainly used in France and East Europe. The chroma is FM modulated and the R-Y and B-Y signals are transmitted line sequentially. Colour carriers= 4.406250 MHz and 4.250000 MHz
SIF	Sound Intermediate Frequency
SMD	Surface Mounted Device
SMPS	Switched Mode Power Supply
SNERT	Synchronous No parity Eight bit Reception and Transmit
SSB	Small Signal Board
STBY	Stand-by
SW	Sub woofer
SVGA	800x600 (4:3)
SVHS	Super Video Home System
TMDS	Transition Minimised Differential Signalling
TOP	Table Of Pages; TXT standard
TXT	Teletext
uP	Microprocessor
UV	Colour difference signals
UVSH	UHF, VHF, S-, and Hyper-band
VA	Vertical Acquisition
V-a	Addressing voltage for the plasma display
VDS	Virtual Dolby Surround
VESA	Video Electronics Standards Association
VFB	Vertical Flyback Pulse: vertical sync pulse coming from the Feature Box
VGA	Video Graphics Array; 640x480 (4:3)
VL	Variable Level out: processed audio output towards external amplifier
V-ra	Setting voltage for V_a
V-rs	Setting voltage for V_s
V-s	Sustain voltage for the plasma display
WSS	Wide Screen Signalling; used by broadcasters to transmit e.g. PALPLUS and 16:9 Aspect Ratio
WXGA	Wide eXtended Graphics Array; 1280x768 (15:9) or 1366x768 (16:9)
WYSIWYR	What You See Is What You Record: record selection that follows main picture and sound
XGA	Extended Graphics Array; 1024x768 (4:3)
XTAL	Quartz crystal
Y	Luminance signal
Y100	Y from Feature Box
YPbPr	This is a scaled version of the YUV colour space. Y= Luminance, Pb/Pr= Colour difference signals B-Y and R-Y, other amplitudes w.r.t. to YUV
Y-OUT	Luminance-signal to HOP IC
YUV	Colour space used by the NTSC and PAL video systems. Y is the luminance and U/V are the colour difference signals

9.11 IC Data Sheets

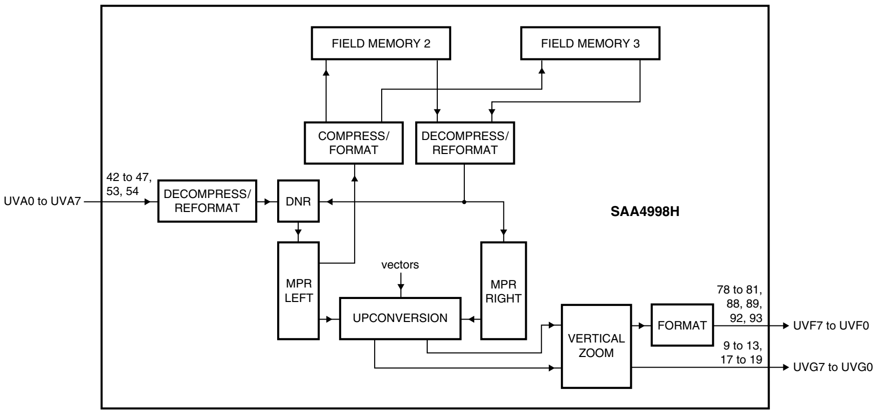
In this paragraph, the internal block diagrams and pinning are given of ICs that are drawn as a 'black box' in the electrical diagrams (with the exception of 'memory' and 'logic' ICs).

9.11.1 Diagram B3B, SAA4998 (IC7760)

Block diagram of the luminance part in full FALCONIC mode.


YA0 to YA7
55 to 62
DYNAMIC NOISE REDUCTION
FIELD MEMORY 2
MEMORY CONTROL
FIELD MEMORY 3
VD 94
SNCL 41
SNDA 34
SNRST 33
SNERT INTERFACE
COMPRESS
DECOMPRESS
ACV 25
RST 32
PIPON 36
TWOFMON 50
REA 63
IE 64
REF 67
CONTROL
MUX
MUX
DE-INTERLACER WITH EDDI
vectors
SAA4998H
MPR LEFT
MPR RIGHT
SPM
TPM
ESM
MOTION ESTIMATOR
vectors
UPCONVERSION
VERTICAL PEAKING
VERTICAL ZOOM
68, 69, 71 to 76
YF7 to YF0
1, 2, 5 to 8, 95, 100
YG7 to YG0
TCK 31
TDO 30
TDI 29
TMS 28
TRSTN 27
BST/TEST
CLK32 83

Block diagram of the chrominance part in full FALCONIC mode.


FIELD MEMORY 2
FIELD MEMORY 3
COMPRESS/ FORMAT
DECOMPRESS/ REFORMAT
42 to 47, 53, 54
UVA0 to UVA7
DECOMPRESS/ REFORMAT
DNR
SAA4998H
vectors
MPR LEFT
UPCONVERSION
MPR RIGHT
VERTICAL ZOOM
FORMAT
78 to 81, 88, 89, 92, 93
UVF7 to UVF0
9 to 13, 17 to 19
UVG7 to UVG0

Pin configuration

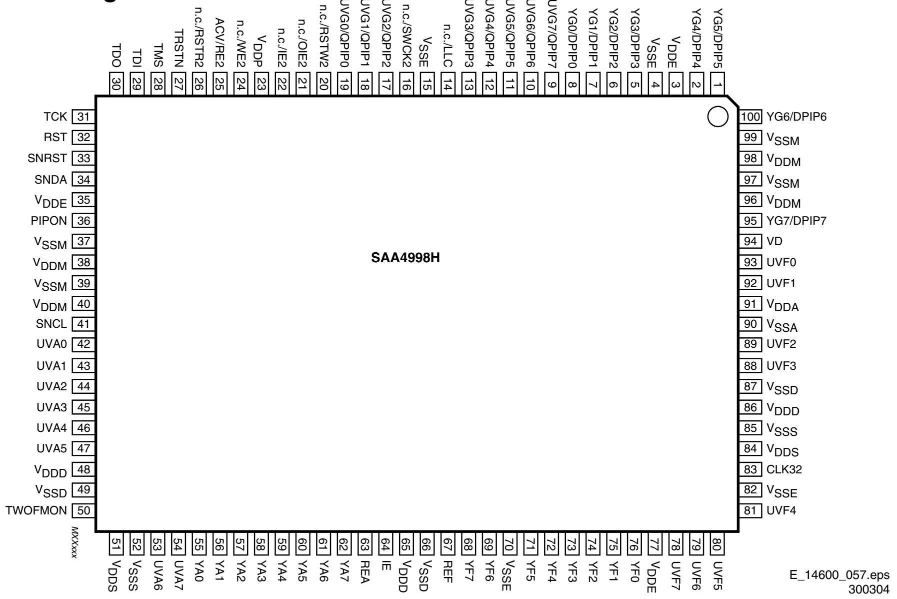
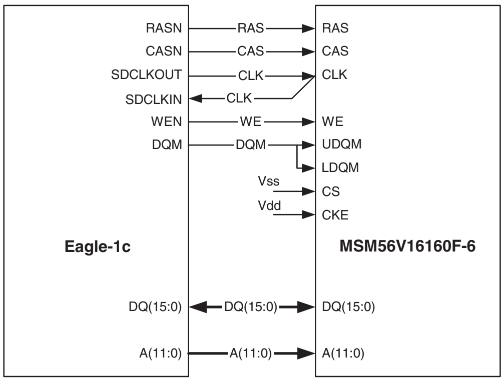

1 YG5/DPIP5
2 YG4/DPIP4
3 VDDE
4 VSSE
5 YG3/DPIP3
6 YG2/DPIP2
7 YG1/DPIP1
8 YG0/DPIP0
9 UVG7/QPIP7
10 UVG6/QPIP6
11 UVG5/QPIP5
12 UVG4/QPIP4
13 UVG3/QPIP3
14 n.c./LLC
15 VSSE
16 n.c./SWCK2
17 UVG2/QPIP2
18 UVG1/QPIP1
19 UVG0/QPIP0
20 n.c./RSTW2
21 n.c./OIE2
22 n.c./IE2
23 VDDP
24 n.c./WE2
25 ACV/RE2
26 n.c./RSTR2
27 TRSTN
28 TMS
29 TDI
30 TDO
TCK 31
RST 32
SNRST 33
SNDA 34
VDDE 35
PIPON 36
VSSM 37
VDDM 38
VSSM 39
VDDM 40
SNCL 41
UVA0 42
UVA1 43
UVA2 44
UVA3 45
UVA4 46
UVA5 47
VDDD 48
VSSD 49
TWOFMON 50
51 VDDS
52 VSSS
53 UVA6
54 UVA7
55 YA0
56 YA1
57 YA2
58 YA3
59 YA4
60 YA5
61 YA6
62 YA7
63 REA
64 IE
65 VDDD
66 VSSD
67 REF
68 YF7
69 YF6
70 VSSE
71 YF5
72 YF4
73 YF3
74 YF2
75 YF1
76 YF0
77 VDDE
78 UVF7
79 UVF6
80 UVF5
81 UVF4
82 VSSE
83 CLK32
84 VDDS
85 VSSS
86 VDDD
87 VSSD
88 UVF3
89 UVF2
90 VSSA
91 VDDA
92 UVF1
93 UVF0
94 VD
95 YG7/DPIP7
96 VDDM
97 VSSM
98 VDDM
99 VSSM
100 YG6/DPIP6
SAA4998H
MXXxxx
E_14600_057.eps
300304

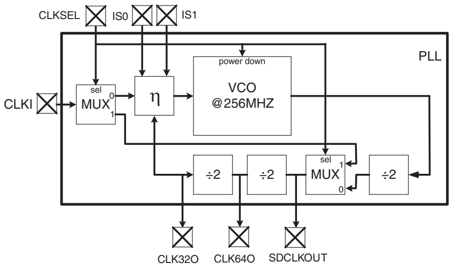
Figure 9-6 Internal block diagram and pin configuration.

9.11.2 Diagram B3C, T6TX5EF (IC7720)

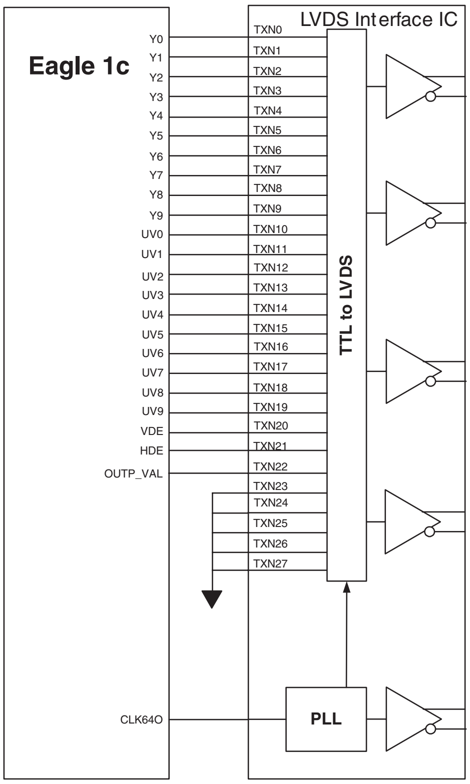
Interface between Eagle and External SDRAM

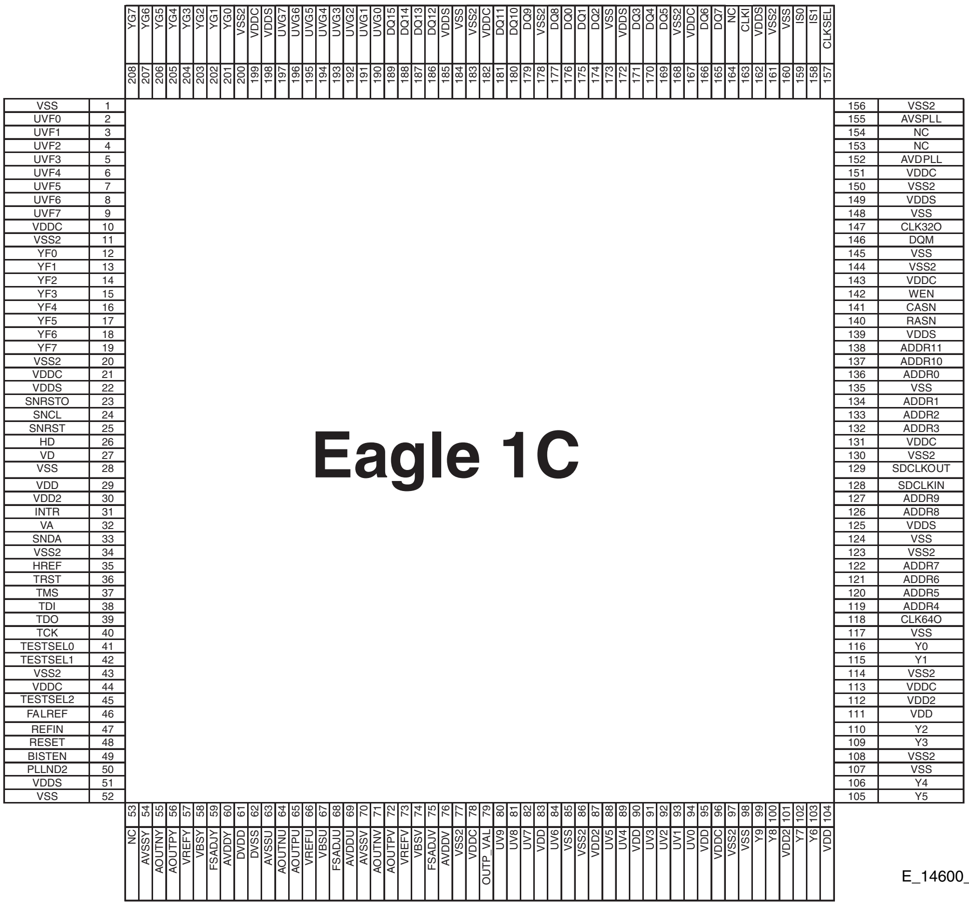

RASN
CASN
SDCLKOUT
SDCLKIN
WEN
DQM
RAS
CAS
CLK
CLK
WE
DQM
RAS
CAS
CLK
WE
UDQM
LDQM
Vss
CS
Vdd
CKE
Eagle-1c
MSM56V16160F-6
DQ(15:0)
DQ(15:0)
DQ(15:0)
A(11:0)
A(11:0)
A(11:0)

Internal Clock generation


CLKSEL
IS0
IS1
PLL
power down
VCO
@256MHZ
CLKI
sel
MUX
0
1
η
÷2
÷2
sel
MUX
1
0
÷2
CLK32O
CLK64O
SDCLKOUT

EAGLE IC digital output interface to LVDS device

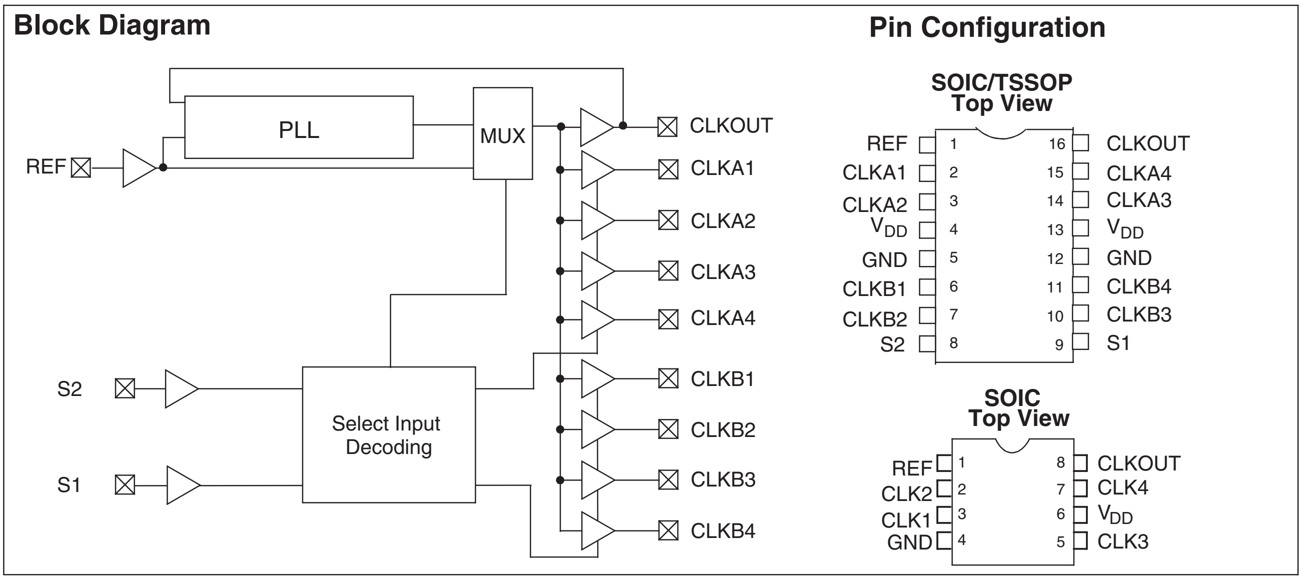

Eagle 1c
LVDS Interface IC
Y0
Y1
Y2
Y3
Y4
Y5
Y6
Y7
Y8
Y9
UV0
UV1
UV2
UV3
UV4
UV5
UV6
UV7
UV8
UV9
VDE
HDE
OUTP_VAL
TXN0
TXN1
TXN2
TXN3
TXN4
TXN5
TXN6
TXN7
TXN8
TXN9
TXN10
TXN11
TXN12
TXN13
TXN14
TXN15
TXN16
TXN17
TXN18
TXN19
TXN20
TXN21
TXN22
TXN23
TXN24
TXN25
TXN26
TXN27
TTL to LVDS
CLK64O
PLL


Eagle 1C
208 YG7
207 YG6
206 YG5
205 YG4
204 YG3
203 YG2
202 YG1
201 YG0
200 VSS2
199 VDDC
198 VDDS
197 UVG7
196 UVG6
195 UVG5
194 UVG4
193 UVG3
192 UVG2
191 UVG1
190 UVG0
189 DQ15
188 DQ14
187 DQ13
186 DQ12
185 VDDS
184 VSS
183 VSS2
182 VDDC
181 DQ11
180 DQ10
179 DQ9
178 VSS2
177 DQ8
176 DQ0
175 DQ1
174 DQ2
173 VSS
172 VDDS
171 DQ3
170 DQ4
169 DQ5
168 VSS2
167 VDDC
166 DQ6
165 DQ7
164 NC
163 CLKI
162 VDDS
161 VSS2
160 VSS
159 IS0
158 IS1
157 CLKSEL
VSS 1
UVF0 2
UVF1 3
UVF2 4
UVF3 5
UVF4 6
UVF5 7
UVF6 8
UVF7 9
VDDC 10
VSS2 11
YF0 12
YF1 13
YF2 14
YF3 15
YF4 16
YF5 17
YF6 18
YF7 19
VSS2 20
VDDC 21
VDDS 22
SNRSTO 23
SNCL 24
SNRST 25
HD 26
VD 27
VSS 28
VDD 29
VDD2 30
INTR 31
VA 32
SNDA 33
VSS2 34
HREF 35
TRST 36
TMS 37
TDI 38
TDO 39
TCK 40
TESTSEL0 41
TESTSEL1 42
VSS2 43
VDDC 44
TESTSEL2 45
FALREF 46
REFIN 47
RESET 48
BISTEN 49
PLLND2 50
VDDS 51
VSS 52
156 VSS2
155 AVSPLL
154 NC
153 NC
152 AVDPLL
151 VDDC
150 VSS2
149 VDDS
148 VSS
147 CLK32O
146 DQM
145 VSS
144 VSS2
143 VDDC
142 WEN
141 CASN
140 RASN
139 VDDS
138 ADDR11
137 ADDR10
136 ADDR0
135 VSS
134 ADDR1
133 ADDR2
132 ADDR3
131 VDDC
130 VSS2
129 SDCLKOUT
128 SDCLKIN
127 ADDR9
126 ADDR8
125 VDDS
124 VSS
123 VSS2
122 ADDR7
121 ADDR6
120 ADDR5
119 ADDR4
118 CLK64O
117 VSS
116 Y0
115 Y1
114 VSS2
113 VDDC
112 VDD2
111 VDD
110 Y2
109 Y3
108 VSS2
107 VSS
106 Y4
105 Y5
53 NC
54 AVSSY
55 AOUTNY
56 AOUTPY
57 VREFY
58 VBSY
59 FSADJY
60 AVDDY
61 DVDD
62 DVSS
63 AVSSU
64 AOUTNU
65 AOUTPU
66 VREFU
67 VBSU
68 FSADJU
69 AVDDU
70 AVSSV
71 AOUTNV
72 AOUTPV
73 VREFV
74 VBSV
75 FSADJV
76 AVDDV
77 VSS2
78 VDDC
79 OUTP_VAL
80 UV9
81 UV8
82 UV7
83 VDD
84 UV6
85 VSS
86 VSS2
87 VDD2
88 UV5
89 UV4
90 VDD
91 UV3
92 UV2
93 UV1
94 UV0
95 VDD
96 VDDC
97 VSS2
98 VSS
99 Y9
100 Y8
101 VDD2
102 Y7
103 Y6
104 VDD

E_14600_058.eps
131004

Figure 9-7 Internal block diagram and pin configuration.

9.11.3 Diagram B3C, CY2305SC-1 (IC7721)


Block Diagram
PLL
MUX
REF
CLKOUT
CLKA1
CLKA2
CLKA3
CLKA4
S2
S1
Select Input Decoding
CLKB1
CLKB2
CLKB3
CLKB4
Pin Configuration
SOIC/TSSOP
Top View
REF 1
CLKA1 2
CLKA2 3
V_{DD} 4
GND 5
CLKB1 6
CLKB2 7
S2 8
16 CLKOUT
15 CLKA4
14 CLKA3
13 V_{DD}
12 GND
11 CLKB4
10 CLKB3
9 S1
SOIC
Top View
REF 1
CLK2 2
CLK1 3
GND 4
8 CLKOUT
7 CLK4
6 V_{DD}
5 CLK3

E_14620_146.eps
200804

Figure 9-8 Internal block diagram and pin configuration.

9.11.4 Diagram B3D, T6TU5XB (IC7752)

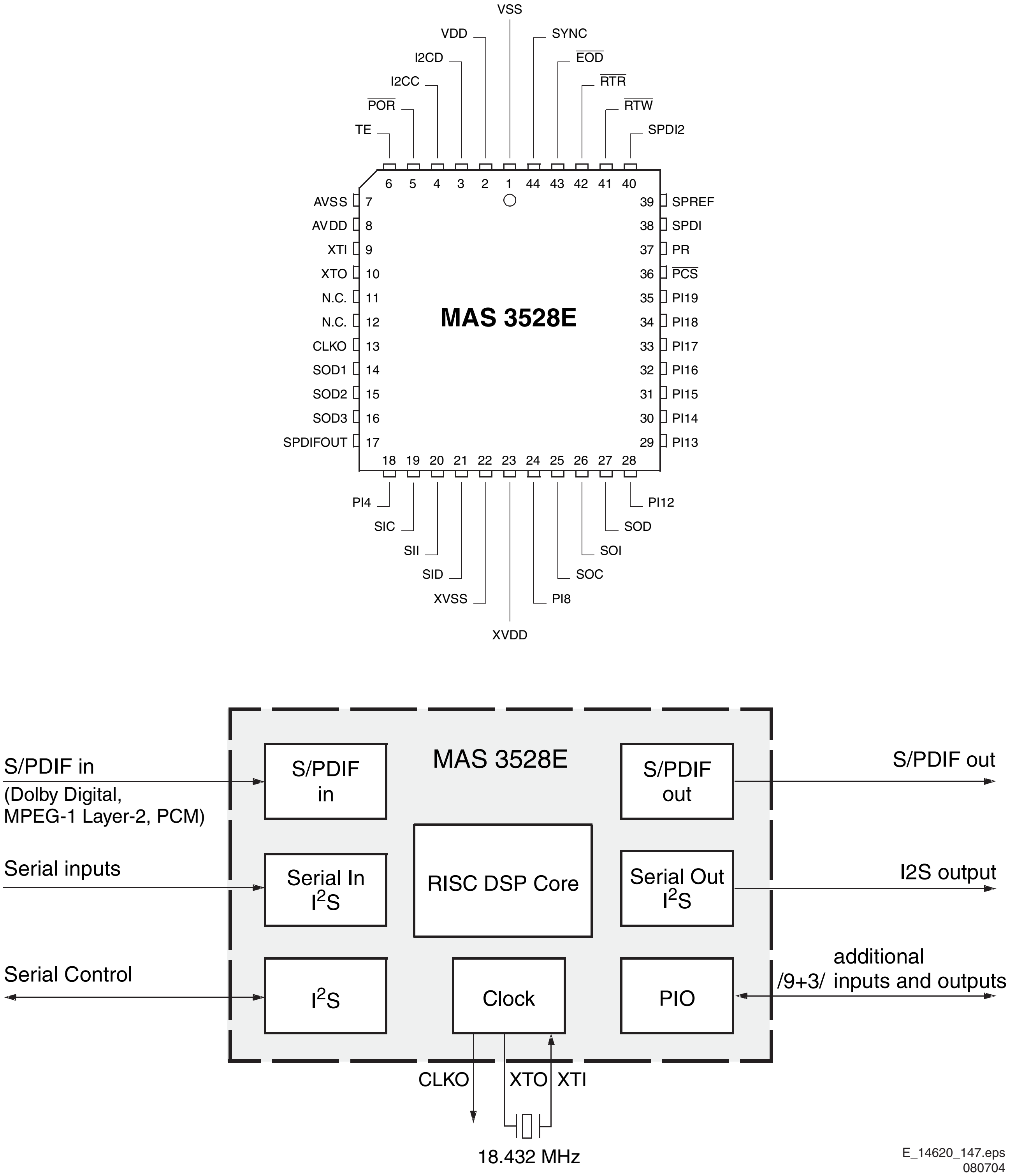
Figure 1 Package outline (top view)

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
A	WEB/ DAVB	UVA0 /Di0	UVA2 /Di2	UVA4 /Di4	UVA6 /Di6	UVA8 /Di8	SEL656	TST1	YA2	YA4	YA6	YA8	VA	HREF	SDA	A
B	YB8	VSS	UVA1 /Di1	UVA3 /Di3	UVA5 /Di5	UVA7 /Di7	YA0 /Di9	BISTEN	YA1	YA3	YA5	YA7	WEA/ DAVA	VSS	SCL	B
C	YB7	YB6	VSS	VDDS	VSS	VSS	VDDC	VDDC	VSS	VSS	VDDC	VDDS	VSS	SNDA	SNRST	C
D	YB5	YB4	VDDC	N.C.									VSS	SNCL	TCK	D
E	YB3	YB2	VSS										VDDC	TMS	TDO	E
F	TST2	YB1	VSS										VSS	TRST	TDI	F
G	CLKASB	YB0 /Do9	VDDS					**COLUMBUS**					VDDS	A0ICC	RESET	G
H	CLKASA	UVB8/ Do8	TST3					**TOP-VIEW**					VDDC	CLK EXT	CLKSEL	H
J	UVB7 /Do7	UVB6/ Do6	VSS										VSS	CLK	WEN	J
K	UVB5 /Do5	UVB4/ Do4	VDDC					**PPA Version 2.7**					VSS	CASN	RASN	K
L	UVB3 /Do3	UVB2 /Do2	VSS										VDDS	DQM	DQ16	L
M	UVB1 /Do1	UVB0 /Do0	VDDS										VSS	DQ14	DQ15	M
N	AVD	N.C.	VDDS	VSS	VSS	VDDC	VSS	VDDS	VDDC	VSS	VDDS	VSS	VSS	VDDS	DQ13	N
P	AVS	VSS	A7	A9	A2	A0	A11	DQ7	DQ6	DQ4	DQ3	DQ1	VDDS	VSS	DQ12	P
R	A4	A5	A6	A8	A3	A1	A10	DQ8	VSS	DQ5	VSS	DQ2	DQ9	DQ10	DQ11	R
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	

E_14600_059.eps
200804

Figure 9-9 Pin configuration

9.11.5 Diagram B6B, MAS3528E (IC7A30)


MAS 3528E
1 VSS
2 VDD
3 I2CD
4 I2CC
5 $\overline{\text{POR}}$
6 TE
7 AVSS
8 AVDD
9 XTI
10 XTO
11 N.C.
12 N.C.
13 CLKO
14 SOD1
15 SOD2
16 SOD3
17 SPDIFOUT
18 PI4
19 SIC
20 SII
21 SID
22 XVSS
23 XVDD
24 PI8
25 SOC
26 SOI
27 SOD
28 PI12
29 PI13
30 PI14
31 PI15
32 PI16
33 PI17
34 PI18
35 PI19
36 $\overline{\text{PCS}}$
37 PR
38 SPDI
39 SPREF
40 SPDI2
41 $\overline{\text{RTW}}$
42 $\overline{\text{RTR}}$
43 $\overline{\text{EOD}}$
44 SYNC
S/PDIF in
(Dolby Digital, MPEG-1 Layer-2, PCM)
Serial inputs
Serial Control
MAS 3528E
S/PDIF in
Serial In I²S
I²S
RISC DSP Core
Clock
S/PDIF out
Serial Out I²S
PIO
S/PDIF out
I2S output
additional /9+3/ inputs and outputs
CLKO
XTO
XTI
18.432 MHz

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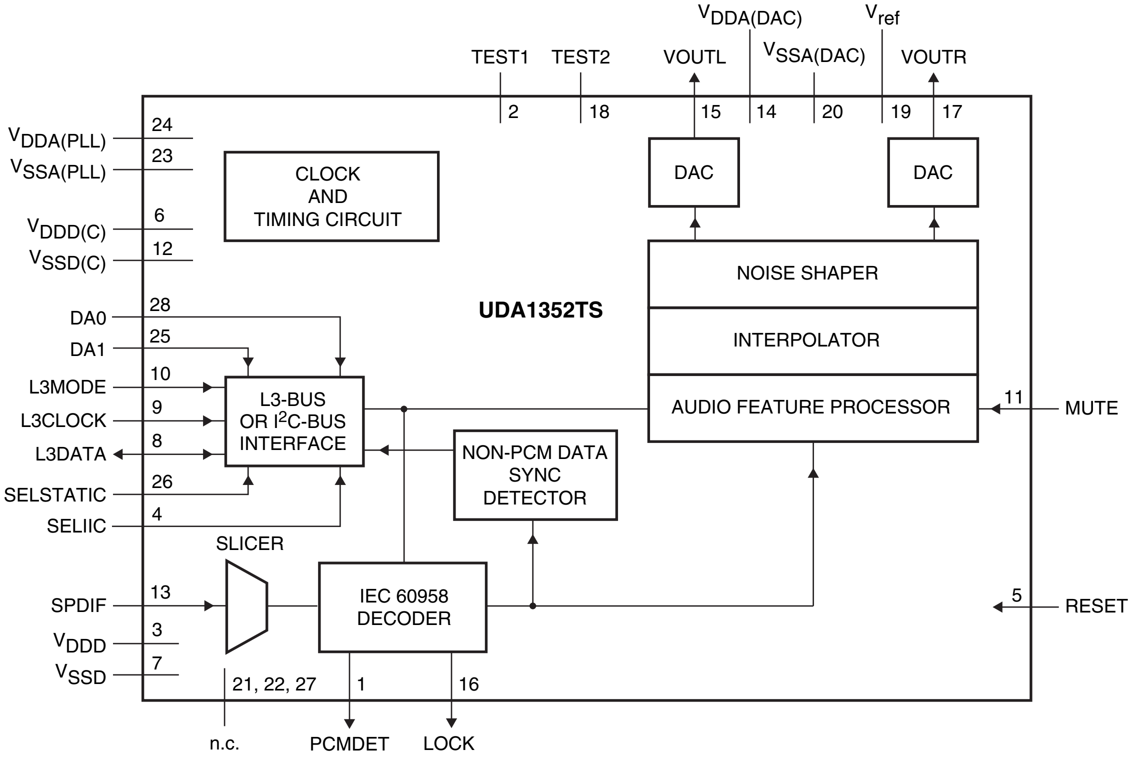
080704

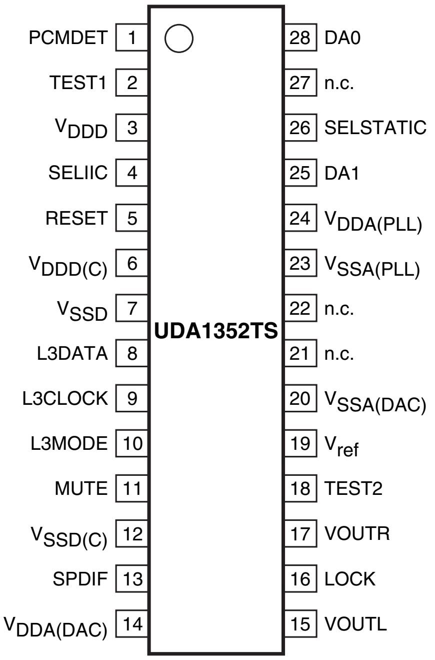
Figure 9-10 Internal block diagram and pin configuration.

9.11.6 Diagram B14D, UDA1352TS (IC7I25)

BLOCK DIAGRAM


VDDA(DAC)
Vref
TEST1
TEST2
VOUTL
VSSA(DAC)
VOUTR
2
18
15
14
20
19
17
24 VDDA(PLL)
23 VSSA(PLL)
6 VDDD(C)
12 VSSD(C)
CLOCK AND TIMING CIRCUIT
DAC
DAC
NOISE SHAPER
INTERPOLATOR
AUDIO FEATURE PROCESSOR
UDA1352TS
28 DA0
25 DA1
10 L3MODE
9 L3CLOCK
8 L3DATA
26 SELSTATIC
4 SELIIC
L3-BUS OR I2C-BUS INTERFACE
NON-PCM DATA SYNC DETECTOR
11 MUTE
SLICER
13 SPDIF
3 VDDD
7 VSSD
IEC 60958 DECODER
5 RESET
21, 22, 27
1
16
n.c.
PCMDET
LOCK

PIN CONFIGURATION


PCMDET 1
TEST1 2
VDDD 3
SELIIC 4
RESET 5
VDDD(C) 6
VSSD 7
L3DATA 8
L3CLOCK 9
L3MODE 10
MUTE 11
VSSD(C) 12
SPDIF 13
VDDA(DAC) 14
28 DA0
27 n.c.
26 SELSTATIC
25 DA1
24 VDDA(PLL)
23 VSSA(PLL)
22 n.c.
21 n.c.
20 VSSA(DAC)
19 Vref
18 TEST2
17 VOUTR
16 LOCK
15 VOUTL
UDA1352TS

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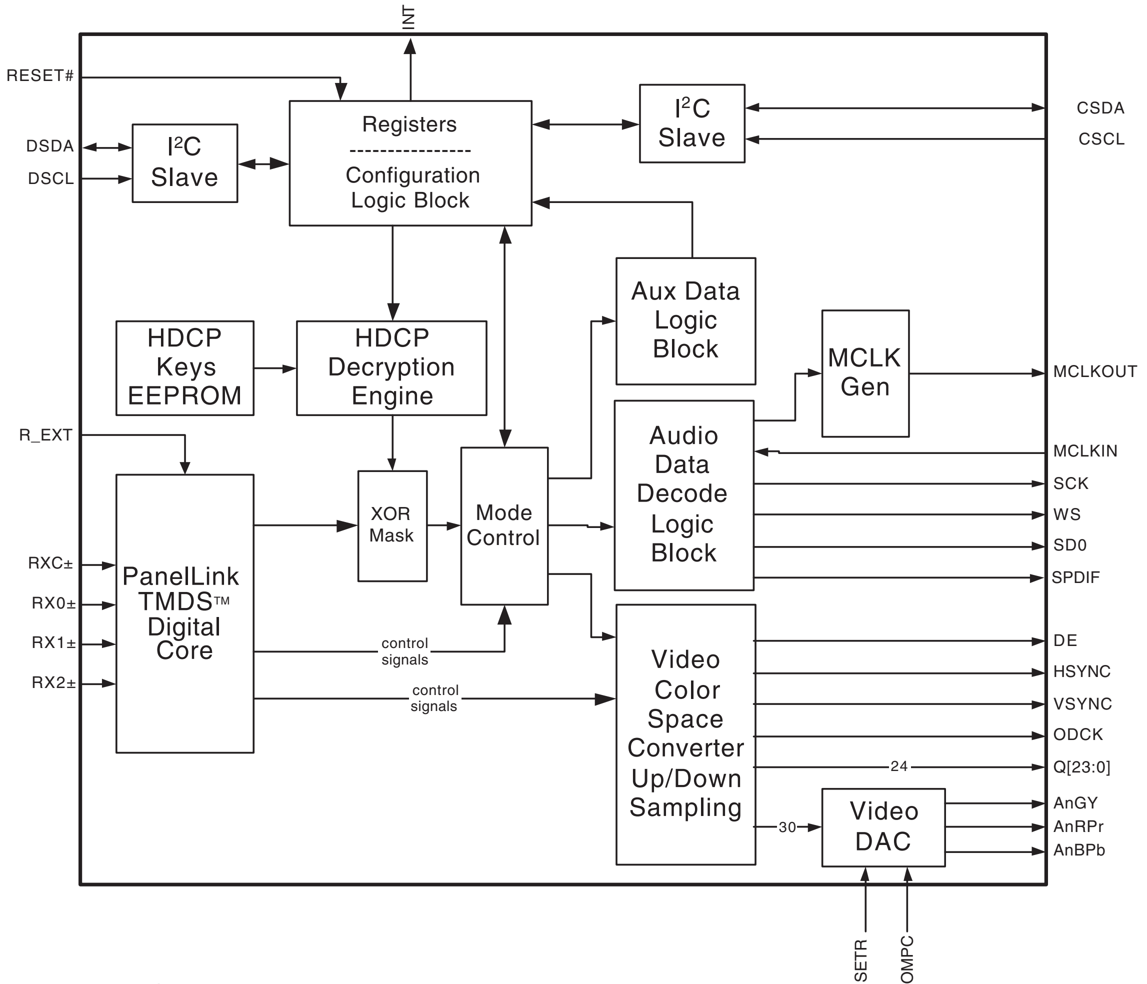
080704

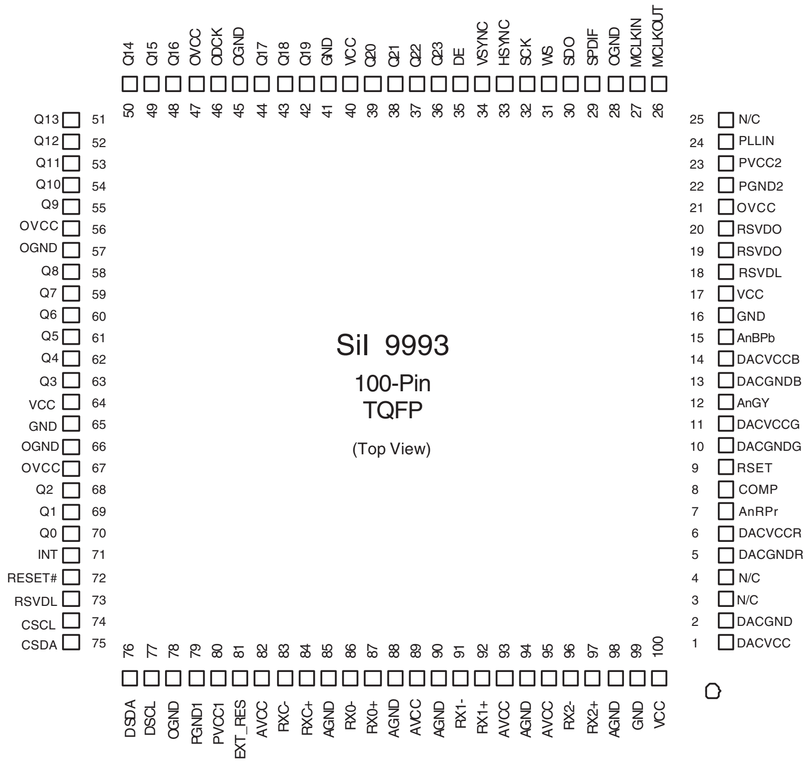
Figure 9-11 Internal block diagram and pin configuration.

9.11.7 Diagram B14F, SiI9993CT100 (IC7I18)

Block Diagram


INT
RESET#
DSDA
DSCL
I²C Slave
Registers
Configuration Logic Block
I²C Slave
CSDA
CSCL
Aux Data Logic Block
HDCP Keys EEPROM
HDCP Decryption Engine
MCLK Gen
MCLKOUT
R_EXT
Audio Data Decode Logic Block
MCLKIN
SCK
WS
SD0
SPDIF
XOR Mask
Mode Control
RXC±
RX0±
RX1±
RX2±
PanelLink TMDS™ Digital Core
control signals
control signals
Video Color Space Converter Up/Down Sampling
DE
HSYNC
VSYNC
ODCK
24
Q[23:0]
30
Video DAC
AnGY
AnRPr
AnBPb
SETR
OMPC

Pin Configuration


Q14 50
Q15 49
Q16 48
OVCC 47
ODCK 46
OGND 45
Q17 44
Q18 43
Q19 42
GND 41
VCC 40
Q20 39
Q21 38
Q22 37
Q23 36
DE 35
VSYNC 34
HSYNC 33
SCK 32
WS 31
SDO 30
SPDIF 29
OGND 28
MCLKIN 27
MCLKOUT 26
25 N/C
24 PLLIN
23 PVCC2
22 PGND2
21 OVCC
20 RSVDO
19 RSVDO
18 RSVDL
17 VCC
16 GND
15 AnBPb
14 DACVCCB
13 DACGNDB
12 AnGY
11 DACVCCG
10 DACGNDG
9 RSET
8 COMP
7 AnRPr
6 DACVCCR
5 DACGNDR
4 N/C
3 N/C
2 DACGND
1 DACVCC
Q13 51
Q12 52
Q11 53
Q10 54
Q9 55
OVCC 56
OGND 57
Q8 58
Q7 59
Q6 60
Q5 61
Q4 62
Q3 63
VCC 64
GND 65
OGND 66
OVCC 67
Q2 68
Q1 69
Q0 70
INT 71
RESET# 72
RSVDL 73
CSCL 74
CSDA 75
76 DSDA
77 DSCL
78 OGND
79 PGND1
80 PVCC1
81 EXT_RES
82 AVCC
83 RXC-
84 RXC+
85 AGND
86 RX0-
87 RX0+
88 AGND
89 AVCC
90 AGND
91 RX1-
92 RX1+
93 AVCC
94 AGND
95 AVCC
96 RX2-
97 RX2+
98 AGND
99 GND
100 VCC
SiI 9993
100-Pin TQFP
(Top View)

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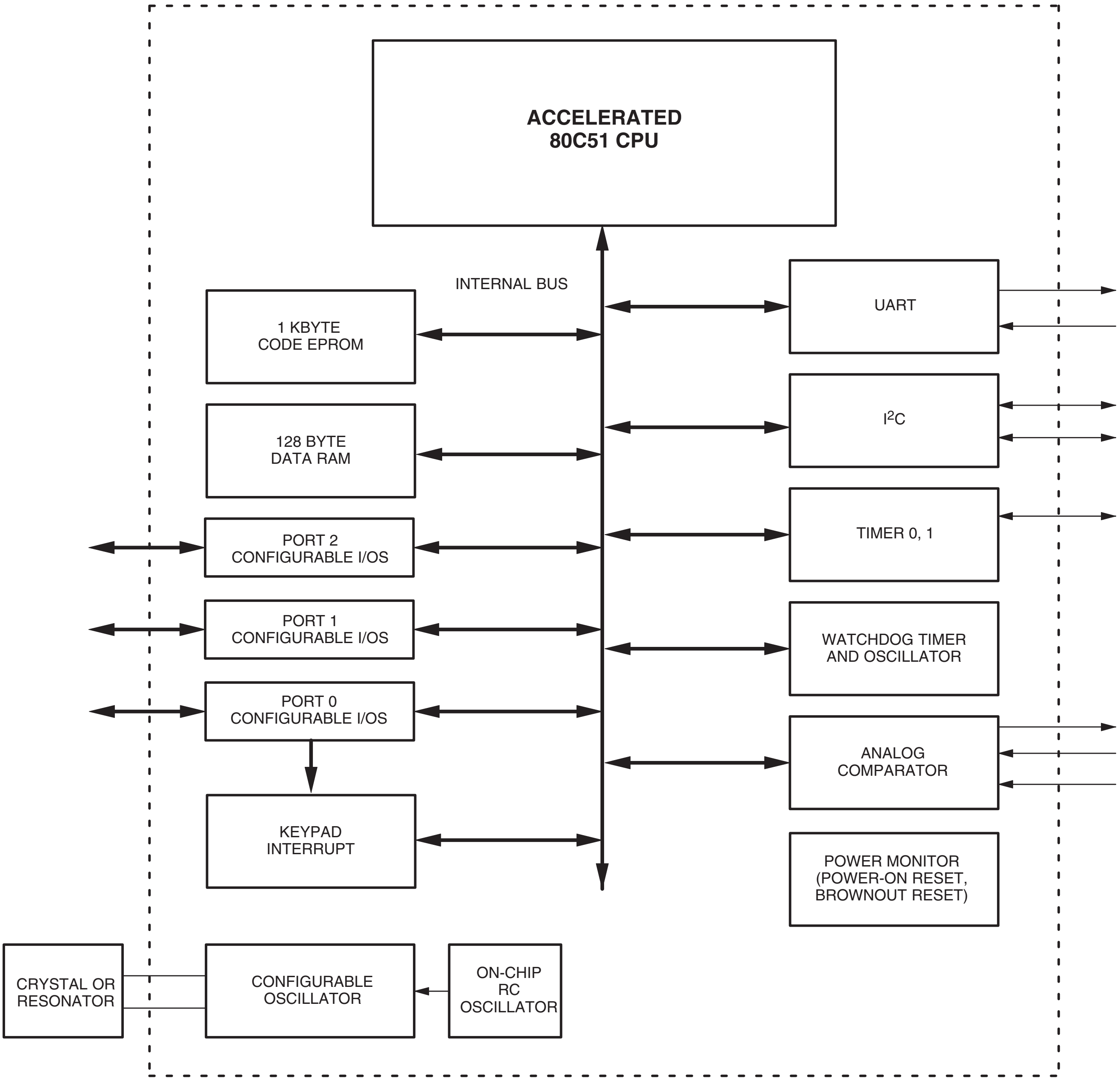
170305

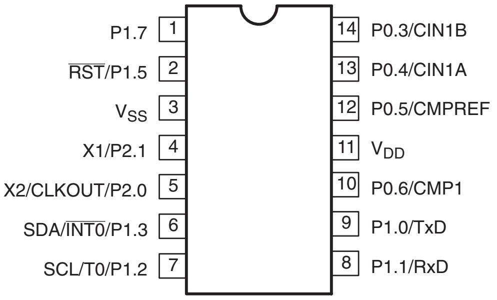
Figure 9-12 Internal block diagram and pin configuration.

9.11.8 Diagram J, P87LPC760BDH (IC7075)

BLOCK DIAGRAM


ACCELERATED
80C51 CPU
INTERNAL BUS
1 KBYTE
CODE EPROM
128 BYTE
DATA RAM
PORT 2
CONFIGURABLE I/OS
PORT 1
CONFIGURABLE I/OS
PORT 0
CONFIGURABLE I/OS
KEYPAD
INTERRUPT
UART
I2C
TIMER 0, 1
WATCHDOG TIMER
AND OSCILLATOR
ANALOG
COMPARATOR
POWER MONITOR
(POWER-ON RESET,
BROWNOUT RESET)
CRYSTAL OR
RESONATOR
CONFIGURABLE
OSCILLATOR
ON-CHIP
RC
OSCILLATOR

PIN CONFIGURATION


P1.7 1
RST/P1.5 2
VSS 3
X1/P2.1 4
X2/CLKOUT/P2.0 5
SDA/INT0/P1.3 6
SCL/T0/P1.2 7
8 P1.1/RxD
9 P1.0/TxD
10 P0.6/CMP1
11 VDD
12 P0.5/CMPREF
13 P0.4/CIN1A
14 P0.3/CIN1B

E_14620_150.eps
200804

Figure 9-13 Internal block diagram and pin configuration.

10. Spare Parts List

Set level

Various

0102	3104 303 12091	Thermal foam block AL
1004▲	9322 215 27682	S42SD-YDO5 (SDI)
1004▲	9322 215 26682	S50HW-XDO3 (SDI)
1004▲	9322 212 78682	FPF42C12812UC (FHP)
1089	3104 328 36892	CCFL inverter panel (42”)
1089	3104 328 36647	CCFL inverter panel (50”)
1116	3104 328 32461	Side I/O assy
8202	3104 311 06811	Cable 9p/340/9p
8302	3104 301 09771	Cable 7p/140/7p
8302	3104 311 02341	Cable 7p/680/7p
8302	3104 311 07591	Cable 7p/820/7p
8303	3104 311 08941	Cable 10p/480/10p
8306	3104 311 03801	Cable 6p/280/6p
8310	3104 311 06631	Cable 4p/480/4p
8310	3104 311 07221	Cable 4p/680/4p
8323	3104 311 04221	Cable 10p/220/10p Wh
8350	8204 000 76832	Cable 31p/400/30p
8350	8204 000 76852	Cable 31p/330/31p
8911	3104 311 07911	Cable Ring/180/Ring

PDP Supply for FHP 42" [A]

Various

0008▲	4822 265 11253	Fuse holder
0010	3122 421 60171	Spring
0011	3122 421 60171	Spring
0015	4822 695 00005	Insulating plate
0306	2422 025 08149	Connector 6p m
0307	2422 025 17759	Connector 20p f
0308▲	4822 265 20723	Connector 2p
0311	2422 025 10769	Connector 9p m
0323	2422 025 15085	Connector 10p m
0342	4822 267 10618	Connector 7p
0352	4822 267 10618	Connector 7p
1002	2422 025 11244	Connector 7p m
1004▲	9965 000 07788	Fuse T2A 250V
1082▲	4822 071 52502	Fuse 2.5A
1083▲	4822 071 52502	Fuse 2.5A
1084▲	2422 086 10849	Fuse 1A F 250V
1110▲	4822 071 55002	Fuse T5A 250V
1200▲	9965 000 07788	Fuse T2A 250V
1260	4822 252 51186	Fuse 2A
1400▲	4822 253 30467	Fuse 6.3A
1402▲	4822 252 60151	DSP-501N-A21F
1450▲	4822 280 10382	SDT-SS-109DM
1460▲	4822 280 10382	SDT-SS-109DM
1M10	2422 025 09406	Connector 4p m

⊣⊢

2000▲	2252 811 95017	470pF 10% 250V
2001	2222 338 22474	470nF 20% 275V
2002	3198 030 72290	22µF 20% 35V
2003	4822 124 12056	1000µF 20% 35V
2004	2238 867 18101	100pF 1% 50V 0603
2005	2238 867 18101	100pF 1% 50V 0603
2006	2020 552 96618	1nF 10% 50V 0402
2007	2238 586 59812	100nF 20% 50V 0603
2008	5322 126 11583	10nF 10% 50V 0603
2009	3198 030 82280	2.2µF 20% 50V
2010	5322 126 11583	10nF 10% 50V 0603
2011	2022 333 00124	15nF 5% 1.6kV
2012	4822 126 11254	330pF 10% 2kV
2013	4822 126 11254	330pF 10% 2kV
2014	4822 126 13862	1.5nF 10% 2kV
2015	5322 126 11583	10nF 10% 50V 0603
2016	3198 030 82280	2.2µF 20% 50V
2017	2022 333 00124	15nF 5% 1.6kV
2018	2238 867 18101	100pF 1% 50V 0603
2019▲	2020 554 90169	470pF 10% 250V
2020	2020 024 90737	3300µF 20% 100V
2021	2020 024 90737	3300µF 20% 100V
2022	2020 021 91354	1000µF 20% 50V
2022	4822 124 41184	470µF 20% 50V
2023	2222 580 15649	100nF 10% 50V 0805
2024	3198 035 03320	3.3nF 5% 50V 0402
2025	2222 365 85224	220nF 10% 100V
2025	4822 124 12084	1µF 20% 50V
2026	2020 552 96623	2.2nF 10% 50V 0402
2027	3198 017 31530	15nF 20% 50V 0603
2028	2238 930 11541	220pF 5% 200V
2029	2238 930 11541	220pF 5% 200V
2030	2238 586 59812	100nF 20% 50V 0603
2031	4822 124 12084	1µF 20% 50V
2032	2020 552 96831	22nF 10% 50V
2033	2238 586 59812	100nF 20% 50V 0603
2034	4822 126 14525	47pF 5% 1kV
2035	2020 552 96618	1nF 10% 50V 0402
2036	2020 552 96831	22nF 10% 50V
2037	4822 126 14525	47pF 5% 1kV
2038	3198 016 31020	1nF 25V 0603
2040	2238 586 59812	100nF 20% 50V 0603
2044	2238 930 11541	220pF 5% 200V
2045	2238 930 11541	220pF 5% 200V
2050	2222 580 15649	100nF 10% 50V 0805
2050	5322 122 32654	22nF 10% 63V 0805
2054	2238 869 15221	220pF 1% 50V 0402
2055	4822 126 14247	1.5nF 50V 0603
2056	2238 869 15221	220pF 1% 50V 0402
2057	4822 126 14247	1.5nF 50V 0603
2058	4822 124 40756	1µF20% 100V
2059	2238 586 59812	100nF 20% 50V 0603
2061	2238 586 59812	100nF 20% 50V 0603
2090	2020 021 91729	4.7µF 20% 35V
2111	2238 869 15221	220pF 1% 50V 0402
2112	2020 552 96618	1nF 10% 50V 0402
2113	4822 124 12379	220µF 25V
2114	2020 552 96683	220nF 10% 50V
2115	2020 552 96628	10nF 10% 16V 0402
2117	2222 780 15656	330nF 10% 16V
2118	4822 126 13449	1nF 10% 2kV
2121	2020 024 90736	2200µF 20% 100V
2122	4822 121 51319	1µF 10% 63V
2123	3198 035 03320	3.3nF 5% 50V 0402
2126	2238 586 59812	100nF 20% 50V 0603
2133	4822 124 81151	22µF 50V
2138	2022 552 05679	1µF 10% 16V 0805
2203	2238 586 59812	100nF 20% 50V 0603
2205	3198 030 82280	2.2µF 20% 50V
2210	4822 124 80151	47µF 16V
2211	2238 869 15221	220pF 1% 50V 0402
2212	2020 552 96326	220nF 10% 16V
2213	4822 126 10206	2.2nF 10% 500V
2213	5322 126 10223	4.7nF 10% 63V
2214	5322 126 10223	4.7nF 10% 63V
2217	2222 780 15656	330nF 10% 16V
2218	2022 333 00106	3.3nF 5% 1.6kV
2222	2238 869 15101	100pF 5% 50V 0402
2223	2238 869 15101	100pF 5% 50V 0402
2225	2020 021 91551	2200µF 20% 25V
2226	2238 586 59812	100nF 20% 50V 0603
2227	2238 869 15101	100pF 5% 50V 0402
2229	4822 124 80791	470µF 20% 16V
2230	4822 124 80791	470µF 20% 16V
2231	4822 124 80151	47µF 16V
2232	2238 869 15101	100pF 5% 50V 0402
2234	2022 552 05679	1µF 10% 16V 0805
2236	4822 124 23002	10µF 16V
2237	4822 124 23002	10µF 16V
2260	2022 552 05679	1µF 10% 16V 0805
2261	3198 026 51020	1000µF 50V
2261	4822 124 41184	470µF 20% 50V
2262	2020 552 96683	220nF 10% 50V
2263	2222 861 15272	2.7nF 5% 50V 0805
2264	4822 126 14583	470nF 10% 16V 0805
2265	4822 126 14241	330pF 0603 50V
2266	2238 916 15641	22nF 10% 25V 0603
2266	3198 030 74780	4u7 20% 35V
2267	5322 122 32531	100pF 5% 50V
2268	2020 552 96683	220nF 10% 50V
2269	2020 021 91524	220µF 20% 25V
2269	4822 123 14025	2200µF 20% 16V
2270	4822 124 40433	47µF 20% 25V
2273	2238 586 59812	100nF 20% 50V 0603
2290	5322 126 11583	10nF 10% 50V 0603
2291	2238 869 15221	220pF 1% 50V 0402
2292	3198 026 51020	1000µF 50V
2293	2238 869 15221	220pF 1% 50V 0402
2294	3198 026 51020	1000µF 50V
2303	2020 552 96683	220nF 10% 50V
2304	2020 552 96618	1nF 10% 50V 0402
2305	2238 586 59812	100nF 20% 50V 0603
2306	2238 586 59812	100nF 20% 50V 0603
2316	2238 586 59812	100nF 20% 50V 0603
2322	2238 586 59812	100nF 20% 50V 0603
2324	2238 586 59812	100nF 20% 50V 0603
2343	3198 030 82280	2.2µF 20% 50V
2350	4822 124 12095	100µF 20% 16V
2352	2238 586 59812	100nF 20% 50V 0603
2364	2238 586 59812	100nF 20% 50V 0603
2366	4822 126 14585	100nF 10% 0805 50V
2376	2238 586 59812	100nF 20% 50V 0603
2380	2238 586 59812	100nF 20% 50V 0603
2381	2238 586 59812	100nF 20% 50V 0603
2385	2022 552 05679	1µF 10% 16V 0805
2393	2238 586 59812	100nF 20% 50V 0603
2396	2020 552 96683	220nF 10% 50V
2400▲	2222 338 22474	470nF 20% 275V
2401▲	2222 338 22474	470nF 20% 275V
2404	4822 126 14525	47pF 5% 1kV
2405▲	2252 811 95017	470pF 10% 250V
2406	4822 126 14525	47pF 5% 1kV
2407▲	2252 811 95017	470pF 10% 250V
2465	4822 124 12095	100µF 20% 16V
2502	2238 869 15101	100pF 5% 50V 0402
2503	2020 024 90708	47µF 400V 20%
2504	2020 552 96618	1nF 10% 50V 0402
2505	4822 124 12056	1000µF 20% 35V
2507	2238 869 15101	100pF 5% 50V 0402
2508	4822 124 12095	100µF 20% 16V
2509	2238 869 15101	100pF 5% 50V 0402
2510	2020 021 91506	1000µF 20% 16V
2511	2238 586 59812	100nF 20% 50V 0603
2512	2238 586 59812	100nF 20% 50V 0603
2513	2222 580 15649	100nF 10% 50V 0805
2531	4822 124 23002	10µF 16V
2532	4822 124 12095	100µF 20% 16V
2533	4822 124 12095	100µF 20% 16V
2540	4822 124 12095	100µF 20% 16V
2541	4822 124 12095	100µF 20% 16V
2600	4822 122 33799	1nF 10% 1kV
2601	4822 122 33799	1nF 10% 1kV
2602	2020 552 96618	1nF 10% 50V 0402
2605	2222 479 90086	1µF 400V 5%
2608	2020 552 96618	1nF 10% 50V 0402
2610	2022 333 00298	1.8nF 5% 2kV
2611	2022 333 00296	220pF 5% 2kV
2612	2020 552 96618	1nF 10% 50V 0402
2614	5322 126 11578	1nF 10% 50V 0603
2616	4822 124 12415	220µF 20% 400V
2617	4822 124 12415	220µF 20% 400V
2640	3198 035 04710	470pF 50V 0402
2642	2020 552 96618	1nF 10% 50V 0402
2651	5322 126 11583	10nF 10% 50V 0603
2653	4822 126 14241	330pF 0603 50V
2654	4822 124 80151	47µF 16V
2655	2022 552 05679	1µF 10% 16V 0805
2656	2222 580 15649	100nF 10% 50V 0805
2660	4822 126 13881	470pF 5% 50V
2661	2020 552 96618	1nF 10% 50V 0402
2662	4822 124 80061	1000µF 20% 25V
2663	4822 124 40255	100µF 20% 63V
2664	4822 124 40255	100µF 20% 63V
2665	4822 126 13881	470pF 5% 50V
2666	2020 552 96793	4.7nF 10% 50V 0402
2670	2238 586 59812	100nF 20% 50V 0603
2671	2238 586 59812	100nF 20% 50V 0603
2672	2222 580 15649	100nF 10% 50V 0805
2673	2020 558 00002	4.7nF 10% 630V
2674	2020 558 90621	10nF 630V
2675	2020 558 90621	10nF 630V

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3003	4822 117 13632	100kΩ 1% 0603 0.62W
3004	3198 031 01530	15kΩ 5% 0.01W 0402
3005	4822 117 13603	33kΩ 5% 0402
3006	4822 051 30103	10kΩ 5% 0.062W
3007	3198 031 04720	4.7kΩ 5% 0402
3008	4822 051 30102	1kΩ 5% 0.062W
3009	4822 051 30102	1kΩ 5% 0.062W
3010	3198 031 01530	15kΩ 5% 0.01W 0402
3011	4822 051 30561	560Ω 5% 0.062W
3012	3198 031 04720	4.7kΩ 5% 0402
3013	4822 051 30103	10kΩ 5% 0.062W
3014	4822 050 23309	33Ω 1% 0,6W
3015	4822 050 21009	10Ω 1% 0.6W
3016	4822 051 10102	1kΩ 2% 0.25W
3017	4822 050 23309	33Ω 1% 0,6W
3018	4822 050 21009	10Ω 1% 0.6W
3019	4822 051 10102	1kΩ 2% 0.25W
3020	3198 031 05630	56kΩ 5% 0402
3021	4822 053 11688	6.8Ω 5% 2W
3022	4822 051 30331	330Ω 5% 0.062W
3023	3198 031 04730	47Ω 5% 0402
3024	4822 117 12306	150kΩ 1% 0.1W
3025	2322 706 71802	1.8kΩ 5% 0402
3026	4822 051 20684	680kΩ 5% 0.1W
3027	3198 031 04730	47Ω 5% 0402

3028	2322 704 67502	7.5kΩ 1% 0.5W
3029	4822 051 30472	4.7Ω 5% 0.062W
3030	3198 031 01830	18kΩ 5% 0.01W 0402
3031	2322 704 61103	11kΩ 1% 0603
3032	2322 704 61103	11kΩ 1% 0603
3033	4822 051 30222	2.2kΩ 5% 0.062W
3034	4822 117 13596	220Ω 5% 0.01W 0402
3035	4822 051 20684	680kΩ 5% 0.1W
3036	2122 612 00051	NTC 1Ω 20%
3037	4822 051 30103	10kΩ 5% 0.062W
3038	4822 117 13632	100kΩ 1% 0603 0.62W
3039	4822 051 30105	1MΩ 5% 0.062W
3040	4822 117 10837	100kΩ 1% 0.1W
3041	4822 117 13603	33kΩ 5% 0402
3042	4822 051 30471	47Ω 5% 0.062W
3043	3198 031 04720	4.7kΩ 5% 0402
3044	4822 051 30102	1kΩ 5% 0.062W
3045	4822 051 30102	1kΩ 5% 0.062W
3046	4822 053 20565	5.6MΩ 5% 0.25W
3047	3198 031 01540	150kΩ 5% 0402
3048	3198 031 04720	4.7kΩ 5% 0402
3049	3198 031 01230	12kΩ 5% 0402
3050⚠	4822 052 10398	3.9Ω 5% 0,33W
3051	4822 051 20562	5.6kΩ 5% 0.1W 0805
3051	4822 051 20822	8.2kΩ 5% 0.1W
3052	4822 117 12306	150kΩ 1% 0.1W
3053	2322 662 93131	PTC 10Ω
3054	4822 117 10833	10kΩ 1% 0.1W
3056	4822 051 30331	330Ω 5% 0.062W
3057	4822 051 30101	100Ω 5% 0.062W
3058	4822 051 20105	1MΩ 5% 0.1W
3062	4822 051 30102	1kΩ 5% 0.062W
3064	4822 051 30103	10kΩ 5% 0.062W
3065	4822 051 30102	1kΩ 5% 0.062W
3066	4822 051 30103	10kΩ 5% 0.062W
3067	3198 031 01530	15kΩ 5% 0.01W 0402
3070	4822 051 30103	10kΩ 5% 0.062W
3071	3198 031 04730	47Ω 5% 0402
3072	4822 053 10472	4.7kΩ 5% 1W
3075	4822 051 20105	1MΩ 5% 0.1W
3076	4822 117 13632	100kΩ 1% 0603 0.62W
3077	4822 051 20105	1MΩ 5% 0.1W
3078	4822 117 13632	100kΩ 1% 0603 0.62W
3080	4822 051 30101	100Ω 5% 0.062W
3081	4822 051 30222	2.2kΩ 5% 0.062W
3083	2312 915 11002	1kΩ 1% 0.5W
3084	4822 117 13606	10kΩ 5% 0.01W 0402
3085	3198 031 04730	47Ω 5% 0402
3086	3198 031 04730	47Ω 5% 0402
3087	3198 031 04730	47Ω 5% 0402
3088	3198 031 04730	47Ω 5% 0402
3090	4822 051 30101	100Ω 5% 0.062W
3091	4822 051 30102	1kΩ 5% 0.062W
3092	4822 051 10102	1kΩ 2% 0.25W
3093	4822 051 30102	1kΩ 5% 0.062W
3094	4822 051 10102	1kΩ 2% 0.25W
3095	4822 051 30471	47Ω 5% 0.062W
3096	3198 031 05620	5.6kΩ 5% 0.01W 0402
3097	3198 031 08210	820Ω 5% 0,5W
3098	3198 031 01090	10Ω 5% 0.01W 0402
3106	4822 117 12955	2.7kΩ 1% 0.1W 0805
3107	4822 117 12955	2.7kΩ 1% 0.1W 0805
3108	4822 117 12955	2.7kΩ 1% 0.1W 0805
3109	4822 117 12955	2.7kΩ 1% 0.1W 0805
3110	4822 051 30102	1kΩ 5% 0.062W
3112	4822 051 30102	1kΩ 5% 0.062W
3113	3198 031 04740	470 kΩ 5% 0402
3114	2322 705 70564	560kΩ 5% 0402
3115	3198 031 02240	220kΩ 5% 0.1W 0402
3116	4822 051 30102	1kΩ 5% 0.062W
3117	4822 051 30103	10kΩ 5% 0.062W
3118	2122 118 06084	0.051Ω 5% 1W 2512
3120	4822 117 12903	1.8kΩ 1% 0.063W 0603
3121	3198 031 04730	47Ω 5% 0402
3122	2322 734 67503	75kΩ 1% 0.062W 0805
3123	4822 117 10965	18kΩ 1% 0.1W
3124	2322 704 67502	7.5kΩ 1% 0.5W
3125	2322 704 67502	7.5kΩ 1% 0.5W
3126	2322 706 72202	2.2kΩ 5% 0402
3128	4822 117 13603	33kΩ 5% 0402
3130	4822 051 30123	12kΩ 5% 0.1W
3130	4822 051 30472	4.7Ω 5% 0.062W
3131	2322 704 61103	11kΩ 1% 0603
3132	4822 117 13596	220Ω 5% 0.01W 0402
3133	4822 051 30101	100Ω 5% 0.062W
3134	4822 051 30331	330Ω 5% 0.062W
3135	3198 031 04730	47Ω 5% 0402
3136	3198 031 04730	47Ω 5% 0402
3138	4822 117 11503	220Ω 1% 0.1W
3139	4822 117 11503	220Ω 1% 0.1W
3140	2322 734 67503	75kΩ 1% 0.062W 0805
3141	2322 734 67503	75kΩ 1% 0.062W 0805
3142	5322 117 12487	1kΩ 1% 0.125W
3143	4822 053 12472	4.7kΩ 5% 3W
3145	2322 763 65107	0.51Ω 1% 1W 2512
3146	2322 763 65107	0.51Ω 1% 1W 2512
3147	2322 704 61103	11kΩ 1% 0603
3148	2322 706 75602	5.6kΩ 5% 0402
3149	3198 031 01090	10Ω 5% 0.01W 0402
3149	4822 052 10478	4.7Ω 5% 0.33W
3200	2322 730 61224	220kΩ 5% 0.062W 0805
3202	4822 051 30479	47Ω 5% 0.062W
3203	4822 051 30101	100Ω 5% 0.062W
3204	4822 117 13632	100kΩ 1% 0603 0.62W
3205	4822 117 13632	100kΩ 1% 0603 0.62W
3206	4822 117 12955	2.7kΩ 1% 0.1W 0805
3207	4822 117 12955	2.7kΩ 1% 0.1W 0805
3208	4822 117 12955	2.7kΩ 1% 0.1W 0805
3209	4822 117 12955	2.7kΩ 1% 0.1W 0805
3212	4822 051 30102	1kΩ 5% 0.062W
3213	4822 117 13603	33kΩ 5% 0402
3214	2322 705 70124	120kΩ 5% 0402
3215	2322 705 70274	270kΩ 5% 0402
3216	4822 051 30102	1kΩ 5% 0.062W
3217	4822 117 13606	10kΩ 5% 0.01W 0402
3218	2122 118 06084	0.051Ω 5% 1W 2512
3219	4822 117 13606	10kΩ 5% 0.01W 0402
3220	4822 050 23309	33Ω 1% 0,6W
3224	2322 706 71203	12kΩ 5% 0402
3225	2322 704 61103	11kΩ 1% 0603
3226	4822 117 13606	10kΩ 5% 0.01W 0402
3228	4822 051 30151	150Ω 5% 0.062W
3229	4822 051 30561	560Ω 5% 0.062W
3230	4822 117 13606	10kΩ 5% 0.01W 0402
3231	3198 031 04730	47Ω 5% 0402
3232	3198 031 03320	3.3kΩ 5% 0402
3233	4822 117 11148	56kΩ 1% 0.1W
3234	3198 031 01510	150Ω 5% 0.01W 0402
3235	4822 117 13606	10kΩ 5% 0.01W 0402
3236	4822 117 11503	220Ω 1% 0.1W
3237	4822 117 11503	220Ω 1% 0.1W
3260	4822 051 30109	10Ω 5% 0.062W
3261	4822 051 30102	1kΩ 5% 0.062W
3262	2322 706 71003	10kΩ 5% 0402
3263	2322 706 71003	10kΩ 5% 0402
3264	3198 031 05610	560Ω 5% 0.01W 0402
3264	3198 031 06820	6.8kΩ 5% 0.01W 0402
3265	4822 051 30102	1kΩ 5% 0.062W
3268	4822 051 30102	1kΩ 5% 0.062W
3269	3198 031 02720	2.7kΩ 5% 0.01W 0402
3292	4822 051 30561	560Ω 5% 0.062W
3300	4822 117 13579	220kΩ 1% 0.1W 0805
3301	4822 117 13579	220kΩ 1% 0.1W 0805
3302	2390 401 41004	100kΩ 1% 0805
3303	2390 401 41004	100kΩ 1% 0805
3304	4822 051 30102	1kΩ 5% 0.062W
3305	2390 401 46202	6.6kΩ 1% 0805
3306	2322 704 61103	11kΩ 1% 0603
3307	5322 117 13028	12kΩ 1% 0.063W 0603
3308	4822 051 30102	1kΩ 5% 0.062W
3311	4822 117 13579	220kΩ 1% 0.1W 0805
3312	4822 051 30102	1kΩ 5% 0.062W
3313	2322 704 67502	7.5kΩ 1% 0.5W
3316	2390 401 47502	7.5kΩ 1% 0805
3317	2322 704 67502	7.5kΩ 1% 0.5W
3320	2322 704 61103	11kΩ 1% 0603
3321	4822 051 30102	1kΩ 5% 0.062W
3322	2322 706 73902	3.9kΩ 1% 0402
3323	2322 706 71003	10kΩ 5% 0402
3324	4822 051 30102	1kΩ 5% 0.062W
3325	4822 051 30471	47Ω 5% 0.062W
3326	3198 031 04720	4.7kΩ 5% 0402
3327	4822 117 13606	10kΩ 5% 0.01W 0402
3328	4822 051 30103	10kΩ 5% 0.062W
3332	2322 706 76803	68kΩ 5% 0402
3333	4822 051 30102	1kΩ 5% 0.062W
3334	2322 706 71003	10kΩ 5% 0402
3335	4822 116 83933	15kΩ 1% 0.1W
3340	4822 051 30102	1kΩ 5% 0.062W
3341	4822 117 13606	10kΩ 5% 0.01W 0402
3342	4822 051 30103	10kΩ 5% 0.062W
3343	4822 051 30102	1kΩ 5% 0.062W
3344	4822 051 30102	1kΩ 5% 0.062W
3345	3198 031 04720	4.7kΩ 5% 0402
3347	4822 051 30331	330Ω 5% 0.062W
3348	4822 051 30331	330Ω 5% 0.062W
3349	4822 051 30102	1kΩ 5% 0.062W
3350	4822 051 30472	4.7Ω 5% 0.062W
3351	4822 051 30103	10kΩ 5% 0.062W
3352	4822 051 30103	10kΩ 5% 0.062W
3353	4822 117 13606	10kΩ 5% 0.01W 0402
3354	3198 031 04720	4.7kΩ 5% 0402
3356	3198 031 05610	560Ω 5% 0.01W 0402
3358	4822 051 30222	2.2kΩ 5% 0.062W
3359	3198 031 05620	5.6kΩ 5% 0.01W 0402
3360	3198 031 01220	1.2kΩ 5% 0.01W 0402
3361	3198 031 04720	4.7kΩ 5% 0402
3362	3198 031 02720	2.7kΩ 5% 0.01W 0402
3363	4822 051 30102	1kΩ 5% 0.062W
3364	4822 051 30102	1kΩ 5% 0.062W
3366	4822 117 13606	10kΩ 5% 0.01W 0402
3367	4822 051 30103	10kΩ 5% 0.062W
3368	2322 671 91104	PTC 120Ω 30V
3369	4822 117 13548	1kΩ 5% 0402
3373	3198 031 04720	4.7kΩ 5% 0402
3374	3198 031 04730	47Ω 5% 0402
3376	3198 031 04730	47Ω 5% 0402
3377	3198 031 04720	4.7kΩ 5% 0402
3378	4822 117 13606	10kΩ 5% 0.01W 0402
3380	3198 031 04730	47Ω 5% 0402
3381	3198 031 04730	47Ω 5% 0402
3382	2322 706 72204	220kΩ 5% 0402
3385	4822 117 13632	100kΩ 1% 0603 0.62W
3386	4822 117 13632	100kΩ 1% 0603 0.62W
3387	4822 051 30471	47Ω 5% 0.062W
3388	4822 051 30102	1kΩ 5% 0.062W
3389	4822 051 30102	1kΩ 5% 0.062W
3390	4822 117 13603	33kΩ 5% 0402
3391	4822 117 13545	100Ω 1% 0402
3392	4822 051 30102	1kΩ 5% 0.062W
3393	4822 117 11297	100kΩ 5% 0.1W
3394	4822 117 13545	100Ω 1% 0402
3396	2390 401 41004	100kΩ 1% 0805
3397	2390 401 41004	100kΩ 1% 0805
3400⚠	2122 550 00158	VDR 1mA 612V
3401⚠	4822 117 10118	1MΩ 5% 0.5W
3404	4822 116 83872	220Ω 5% 0.5W
3450⚠	2322 662 93131	PTC 10Ω
3451⚠	2322 662 93131	PTC 10Ω
3452	2122 612 00051	NTC 1Ω 20%
3460	3198 031 04720	4.7kΩ 5% 0402
3461	4822 117 13606	10kΩ 5% 0.01W 0402
3463	4822 117 13606	10kΩ 5% 0.01W 0402
3465	4822 117 13606	10kΩ 5% 0.01W 0402
3467	4822 117 13606	10kΩ 5% 0.01W 0402
3469	3198 031 04720	4.7kΩ 5% 0402
3470	4822 117 13606	10kΩ 5% 0.01W 0402
3501	4822 051 30102	1kΩ 5% 0.062W
3502	4822 051 30471	47Ω 5% 0.062W
3503	2322 706 74702	4.7kΩ 5% 0402
3504	2322 706 73303	33kΩ 5% 0402
3505	2322 706 74702	4.7kΩ 5% 0402
3506⚠	2322 662 93131	PTC 10Ω
3507	4822 051 20684	680kΩ 5% 0.1W
3508	2322 194 63109	10Ω 5% 2W
3520	4822 051 30109	10Ω 5% 0.062W
3530	4822 117 13632	100kΩ 1% 0603 0.62W
3603	4822 051 20474	470kΩ 5% 0.1W
3604	4822 051 20474	470kΩ 5% 0.1W
3605	4822 051 20474	470kΩ 5% 0.1W
3606	4822 051 30101	100Ω 5% 0.062W
3607	4822 117 12891	220kΩ 1%
3608	2312 915 11209	12Ω 1% 0.5W
3609	4822 051 20474	470kΩ 5% 0.1W
3610	4822 050 23308	3.3Ω 1% 0.6W
3611	2312 915 11002	1kΩ 1% 0.5W
3612	3198 031 01220	1.2kΩ 5% 0.01W 0402
3614	2120 105 00001	0.18Ω 5% 2W
3615	2120 105 00001	0.18Ω 5% 2W
3639	4822 051 10102	1kΩ 2% 0.25W
3640	4822 051 30331	330Ω 5% 0.062W
3641	4822 051 20471	470Ω 5% 0.1W
3642	4822 117 11503	220Ω 1% 0.1W
3643	4822 117 11503	220Ω 1% 0.1W
3651	4822 117 13601	22kΩ 5% 0402
3652	4822 051 30105	1MΩ 5% 0.062W
3654	4822 117 13606	10kΩ 5% 0.01W 0402
3655	4822 051 30102	1kΩ 5% 0.062W
3659	4822 117 11503	220Ω 1% 0.1W
3660	4822 117 11504	270Ω 1% 0.1W
3661	4822 117 11504	270Ω 1% 0.1W
3663⚠	4822 052 10108	1Ω 5% 0.33W
3664	2322 706 71204	120kΩ 5% 0402
3665	4822 117 13606	10kΩ 5% 0.01W 0402
3666	4822 051 30101	100Ω 5% 0.062W
3668⚠	4822 052 11102	1kΩ 5% 0,5W
3669	2322 706 71204	120kΩ 5% 0402
3671	2322 704 61103	11kΩ 1% 0603
3673⚠	4822 052 11102	1kΩ 5% 0,5W
3675	2322 702 60158	1.5Ω
3676	2322 706 74702	4.7kΩ 5% 0402
3677	2322 706 74703	47kΩ 1% 0402
3678	3198 031 04730	47Ω 5% 0402
3679	4822 117 12306	150kΩ 1% 0.1W
3680	4822 117 13579	220kΩ 1% 0.1W 0805
3681	4822 117 13579	220kΩ 1% 0.1W 0805
3682	4822 117 13579	220kΩ 1% 0.1W 0805
3683	4822 051 20334	330kΩ 5% 0.1W
3684	4822 051 20334	330kΩ 5% 0.1W
3685	4822 051 20334	330kΩ 5% 0.1W
3999	4822 051 30102	1kΩ 5% 0.062W
9000	4822 051 20008	Jumper 0805

9002	3198 036 90010	Wire 0.58mm
9021	4822 051 20008	Jumper 0805
9022	4822 051 20008	Jumper 0805

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5001	2422 531 02444	Transformer S13932-04Y
5002⚠	8204 000 77111	Transformer BS42315-01
5004⚠	8204 000 77111	Transformer BS42315-01
5005	3122 138 38901	Mains filter CU28D3
5121	3104 308 20771	Bridge coil BD21232-00
5220	3104 308 20911	Transf. BS29238-00
5225	2422 536 00672	4.7µH 20%
5229	2422 536 00826	220µH 10%
5260	3198 018 71010	100µF 10%
5268	2422 536 00288	100µH 10%
5291	4822 157 11737	22µH 10%
5292	4822 157 11737	22µH 10%
5293	4822 157 11737	22µH 10%
5401	3122 138 38901	Mains filter CU28D3
5402	3122 138 38901	Mains filter CU28D3
5503	4822 157 11737	22µH 10%
5600	3104 308 20821	Coil BS42228-00 B
5601	4822 157 11411	Bead 100MHz
5612	4822 157 11411	Bead 100MHz
5660	4822 157 51192	220µH 10%

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6004	4822 130 11397	BAS316
6005	4822 130 11397	BAS316
6007	4822 130 11397	BAS316
6008	4822 130 11397	BAS316
6009	4822 130 11397	BAS316
6010	4822 130 11397	BAS316
6011	4822 130 11397	BAS316
6012	9340 548 61115	PDZ12B
6018	4822 130 11397	BAS316
6019	4822 130 11397	BAS316
6021	9340 550 66112	BYV28-200/24
6022	4822 130 11397	BAS316
6023	4822 130 11397	BAS316
6027	4822 130 11397	BAS316
6028	4822 130 11397	BAS316
6031	3198 020 55680	BZX384-C5V6
6032	3198 020 55680	BZX384-C5V6
6033	9322 150 18685	BZX384-C47
6034	4822 130 11397	BAS316
6035	4822 130 11397	BAS316
6042	9322 150 18685	BZX384-C47
6044	9322 202 88687	STTH2003CFP
6045	9340 550 66112	BYV28-200/24
6050	4822 130 11152	UDZ18B
6054	9340 553 52115	BAS321
6055	9340 553 52115	BAS321
6061	4822 130 11152	UDZ18B
6062	4822 130 11152	UDZ18B
6075	9340 292 80135	BZG03-C270
6077	9340 292 80135	BZG03-C270
6086	4822 130 11397	BAS316
6095	4822 130 11397	BAS316
6111	4822 130 11397	BAS316
6112	4822 130 11397	BAS316
6113	4822 130 11397	BAS316
6114	9340 548 61115	PDZ12B
6117	4822 130 11152	UDZ18B
6120	9322 202 75687	BYW29FP-200
6123	4822 130 11397	BAS316
6133	4822 130 11397	BAS316
6142	9322 192 15668	SM S3J
6202	4822 130 11397	BAS316
6204	3198 020 55680	BZX384-C5V6
6205	4822 130 11152	UDZ18B
6206	4822 130 11397	BAS316
6211	9322 128 70685	SMSS14
6213	4822 130 11397	BAS316
6216	4822 130 11152	UDZ18B
6225	9322 173 47687	STPS20L40CFP
6230	9322 155 79685	EC31QS04
6260	4822 130 11421	BT151X-500R
6267	4822 130 82627	SB540
6268	9322 198 81685	SL04
6269	9322 099 61685	BYG10J
6270	9322 099 61685	BYG10J
6291	4822 130 11572	STPS8H100F
6292	4822 130 11572	STPS8H100F
6312	4822 130 80622	BAT54
6313	4822 130 80622	BAT54
6321	4822 130 80622	BAT54
6322	4822 130 80622	BAT54
6325	4822 130 11416	PDZ6.8B
6333	4822 130 80622	BAT54
6334	4822 130 80622	BAT54
6340	4822 130 80622	BAT54
6341	4822 130 80622	BAT54
6344	4822 130 10838	UDZ3.3B
6347	4822 130 80622	BAT54
6362	4822 130 11397	BAS316
6364	4822 130 11397	BAS316
6365	4822 130 11397	BAS316
6366	4822 130 80622	BAT54
6375	4822 130 11397	BAS316
6376	4822 130 11397	BAS316
6378	4822 130 80622	BAT54
6460	4822 130 11397	BAS316
6461	4822 130 11397	BAS316
6470	4822 130 11397	BAS316
6471	4822 130 11397	BAS316
6501	9336 018 60133	BZT03-C300
6502	9336 018 60133	BZT03-C300
6503	9322 176 76668	RS1J
6504	9322 176 76668	RS1J
6505	9322 155 79685	EC31QS04
6510	9322 099 61685	BYG10J
6511	9322 099 61685	BYG10J
6512	9322 099 61685	BYG10J
6513	9322 099 61685	BYG10J
6520	4822 130 11397	BAS316
6530	4822 130 11152	UDZ18B
6531	4822 130 11152	UDZ18B
6600	9322 177 84667	GBU8JL-7014
6601	9322 150 17685	BZX384-C39
6605	9322 192 15668	SM S3J
6606	9322 192 15668	SM S3J
6608	9322 128 69685	S1D
6609	9340 289 90135	BZG03-C18
6611	3139 120 52021	BYV29X-500
6640	9322 128 70685	SMSS14
6641	4822 130 11397	BAS316
6642	9322 128 70685	SMSS14
6643	4822 130 11152	UDZ18B
6651	4822 130 80622	BAT54
6652	9322 128 70685	SMSS14
6653	4822 130 10837	UDZS8.2B
6654	4822 130 11397	BAS316
6660	9322 176 76668	RS1J
6661	9322 176 76668	RS1J
6663	9322 198 81685	SL04
6665	9322 198 81685	SL04

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7001	9322 108 21682	MC34067P
7002⚠	9322 149 04682	TCET1102
7003⚠	9322 149 04682	TCET1102
7004	9322 192 17685	P0102BL
7005	9322 192 18687	STP15NK50ZFP
7006	9322 192 18687	STP15NK50ZFP
7007	4822 130 41246	BC327-25
7008	4822 130 41246	BC327-25
7009	3198 010 42310	BC847BW
7010	9322 192 16685	TS2431AI
7011	9322 192 16685	TS2431AI
7017	3198 010 42320	BC857BW
7018	3198 010 42310	BC847BW
7020	9335 671 30126	BC517
7021	9335 671 30126	BC517
7022	3198 010 42310	BC847BW
7042	9340 308 50135	PMST5401
7050	9340 557 16127	PSMN035-150P
7052	9340 557 58118	PSMN063-150D
7058	3198 010 42310	BC847BW
7059	9340 308 60135	PMST5550
7090	3198 010 42320	BC857BW
7091	3198 010 42320	BC857BW
7092	3198 010 44350	BC807-25W
7093	4822 209 80591	LM317T
7101	3198 010 42310	BC847BW
7102	9340 308 60135	PMST5550
7103	3198 010 42320	BC857BW
7110	9340 308 50135	PMST5401
7112	9352 673 56112	TEA1507P/N1
7117	9340 557 17118	PSMN035-150B
7120⚠	9322 149 04682	TCET1102
7121	9322 192 16685	TS2431AI
7130	9322 192 16685	TS2431AI
7134	3198 010 42310	BC847BW
7140	9340 425 10115	BC857BS
7142	9340 308 50135	PMST5401
7200	9340 565 06215	BSH114
7202	9965 000 04199	Connector 2p
7212	9352 673 56112	TEA1507P/N1
7217	9340 557 18127	PSMN070-200P
7220⚠	9322 149 04682	TCET1102
7227	9322 192 16685	TS2431AI
7230	9322 205 64687	L4940P85
7260	9322 166 31682	L4973V3.3
7304	9322 192 16685	TS2431AI
7308	4822 209 60177	LM339D
7326	3198 010 42310	BC847BW
7327	3198 010 42310	BC847BW
7330	4822 209 60177	LM339D
7341	3198 010 42320	BC857BW
7348	3198 010 42310	BC847BW
7351	3198 010 42310	BC847BW
7352	3198 010 42310	BC847BW
7362	3198 010 42310	BC847BW
7366	4822 209 63709	LM324D
7375	3198 010 42310	BC847BW
7376	3198 010 42310	BC847BW
7389	3198 010 42320	BC857BW
7391	3198 010 42310	BC847BW
7393	3198 010 42310	BC847BW
7460	9340 219 30115	BC817-25W
7465	3198 010 42320	BC857BW
7470	9340 219 30115	BC817-25W
7500	9322 037 99682	TNY256P
7501⚠	9322 149 04682	TCET1102
7502	9322 192 16685	TS2431AI
7530	9322 160 70668	SI4936ADY
7540	4822 209 17398	LD1117DT33
7608	5322 130 44593	BC369
7610	9322 192 95687	STW26NM50
7640	9965 000 04199	Connector 2p
7641	9340 219 30115	BC817-25W
7650	9322 130 69682	MC33368P
7654	3198 010 42320	BC857BW
7661	5322 209 90529	MC34063AD

Ambi Light Inverter Panel [AL]

Various

0615	3104 317 09401	SW (check Prod. Survey)
1010⚠	2422 086 00657	Fuse 3A 125V F SMD
1050	2422 543 01431	Xtal 20MHz 16pF
1M10	2422 025 09406	Connector 4p m
1M11	2422 025 12485	Connector 11p m
1M12	4822 267 10735	Connector 3p m
1M13	2422 025 12485	Connector 11p m
1M14	4822 267 10735	Connector 3p m
1M48	2422 025 10768	Connector 3p m

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2001	2020 012 00018	1000µF 20% 16V
2002	2238 586 59812	100nF 20% 50V 0603
2003	2020 552 96618	1nF 10% 50V 0402
2004	2020 552 96618	1nF 10% 50V 0402
2005	3198 034 01590	15pF 1% 50V 0402
2006	3198 034 01590	15pF 1% 50V 0402
2007	4822 126 14238	2.2nF 50V 0603
2008	4822 126 14238	2.2nF 50V 0603
2009	4822 126 14238	2.2nF 50V 0603
2010	4822 126 14238	2.2nF 50V 0603
2011	4822 126 14238	2.2nF 50V 0603
2012	4822 126 14238	2.2nF 50V 0603
2021	2020 552 96683	220nF 10% 50V
2023	2020 552 96683	220nF 10% 50V
2024	2020 552 96683	220nF 10% 50V
2030	2020 552 96683	220nF 10% 50V
2032	2020 552 96683	220nF 10% 50V
2033	2020 552 96683	220nF 10% 50V
2040	2020 552 96683	220nF 10% 50V
2043	2020 552 96683	220nF 10% 50V
2045	2020 552 96683	220nF 10% 50V
2050	2020 552 96683	220nF 10% 50V
2052	2020 552 96683	220nF 10% 50V
2055	2020 552 96683	220nF 10% 50V
2060	2020 552 96683	220nF 10% 50V
2062	2020 552 96683	220nF 10% 50V
2064	2020 552 96683	220nF 10% 50V
2071	2020 552 96683	220nF 10% 50V
2074	2020 552 96683	220nF 10% 50V
2075	2020 552 96683	220nF 10% 50V

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3001	4822 117 13545	100Ω 1% 0402
3002	4822 117 13545	100Ω 1% 0402
3003	4822 117 13596	220Ω 5% 0.01W 0402
3004	4822 051 20471	470Ω 5% 0.1W
3005	4822 051 20561	560Ω 5% 0.1W
3006	2322 762 60102	1kΩ 5% 2512
3007	2322 762 60102	1kΩ 5% 2512
3008	4822 051 20471	470Ω 5% 0.1W

3009	4822 051 20561	560Ω 5% 0.1W
3010	2322 762 60102	1kΩ 5% 2512
3011	2322 762 60102	1kΩ 5% 2512
3012	4822 051 20471	470Ω 5% 0.1W
3013	4822 051 20561	560Ω 5% 0.1W
3014	2322 762 60102	1kΩ 5% 2512
3015	2322 762 60102	1kΩ 5% 2512
3016	3198 031 04720	4.7kΩ 5% 0402
3017	3198 031 04720	4.7kΩ 5% 0402
3018	3198 031 04720	4.7kΩ 5% 0402
3019	3198 031 04720	4.7kΩ 5% 0402
3020	3198 031 04720	4.7kΩ 5% 0402
3022	4822 117 13545	100Ω 1% 0402
3023	4822 117 13545	100Ω 1% 0402
3024	3198 031 04720	4.7kΩ 5% 0402
3025	3198 031 04720	4.7kΩ 5% 0402
3028	4822 117 13606	10kΩ 5% 0.01W 0402
3029	3198 031 04720	4.7kΩ 5% 0402
3030	3198 031 04720	4.7kΩ 5% 0402
3031	3198 031 04720	4.7kΩ 5% 0402
3999	3198 021 31820	1.8kΩ 5% 0.062W 0603
3999	4822 051 30102	1kΩ 5% 0.062W

5002	2422 536 00923	22µH 10% LHL10
5004▲	3104 308 21271	Transf. BD21416-00
5005▲	3104 308 21271	Transf. BD21416-00
5006▲	3104 308 21271	Transf. BD21416-00
5007	2422 536 00923	22µH 10% LHL10
5008	2422 536 00923	22µH 10% LHL10

6000	4822 130 11397	BAS316
6001	4822 130 11397	BAS316
6002	4822 130 11397	BAS316
6003	4822 130 11397	BAS316
6004	4822 130 11397	BAS316
6005	4822 130 11397	BAS316
6006	4822 130 11152	UDZ18B
6007	4822 130 11152	UDZ18B
6008	4822 130 11152	UDZ18B
6009	4822 130 11152	UDZ18B
6010	4822 130 11152	UDZ18B
6011	4822 130 11152	UDZ18B

7001		For SW see item 0615
7002	9322 202 58668	LD1117DT50
7009	3198 010 42310	BC847BW
7010	3198 010 42310	BC847BW
7011	3198 010 42310	BC847BW
7015	9322 214 20668	SI4946EY
7016	9322 214 20668	SI4946EY
7017	9322 214 20668	SI4946EY
7018	3198 010 42310	BC847BW
7019	3198 010 42310	BC847BW
7020	3198 010 42310	BC847BW

Small Signal Board [B]

Various

0601	3104 317 07021	SW (check Prod.Surv.)
0602	3104 317 07041	SW (check Prod.Surv.)
0603	3104 317 06601	SW (check Prod.Surv.)
0605	3104 317 46651	SW (check Prod.Surv.)
1000	2422 086 11092	Fuse 500mA 50V F SMD
1001	2422 543 89022	Xtal 6MHz 20p
1062	2422 549 00148	Socket 3P m
1062	3122 358 76371	Mains inlet delta
1305	2422 543 01184	Xtal 4.433619MHz 20p
1308	2422 543 01183	Xtal 3.579545MHz 16p
1403▲	2422 086 11092	Fuse 500mA 50V F SMD
1404	2422 127 00543	Switch 1p 2pos
1407	2422 549 44324	Filt. 5.5/5.74MHz
1408	2422 549 44372	SAW 38.9MHz K3953L
1409	2422 549 44369	SAW 38.9MHz K9656L
1702	2422 540 98456	Resonator 12MHz
1A00	2422 543 89019	Xtal 18.432MHz 12p
1D01	2422 033 00515	Socket DVI-I 29p f
1E02	2422 025 17274	Connector 10p m
1E04	2422 025 17103	Connector 3p m SMD
1G50	2422 025 18427	Connector 31p f
1I01	2422 025 18133	Socket 21p f
1I04	2422 025 18133	Socket 21p f
1I05	2422 026 05054	Soc CINCH 2p f WhRd
1I06	2422 026 05527	Socket CINCH 2p f
1I07	2422 026 05054	Soc CINCH 2p f WhRd
1I53	2422 549 45325	Bead 67Ω at 100MHz
1I56	2422 549 45325	Bead 67Ω at 100MHz
1I57	2422 549 45325	Bead 67Ω at 100MHz
1I59	2422 549 45325	Bead 67Ω at 100MHz
1I79▲	2422 086 00623	Fuse 3A T 125V
1M01	2422 025 10768	Connector 3p m
1M07	4822 267 10637	Connector 5p
1M15	4822 267 10748	Connector 3p
1M20	2422 025 10772	Connector 12p m
1M48	2422 025 10768	Connector 3p m
1M49	2422 025 10768	Connector 3p m
1M52	2422 025 10769	Connector 9p m
1T01▲	3139 147 19801	UV1318S/A IH -3
1U01▲	2422 086 11112	Fuse 1A T 125V
8220	3104 311 08631	Cable12P/480/12P
8301	3104 311 06831	Cable 3P/680/3P
8303	3104 311 06511	Cable 10p/280/10p
8307	3104 311 05691	Cable 5p/100/5p
8320	3104 311 02280	Cable 10P/680/10P
8321	3104 311 08731	Cable POSI/100/POSI
8321	3122 358 76331	Tree assy M91-CP91
8336	3104 311 03891	Cable 11P/340/11P
8336	3104 311 06991	Cable 11P/280/11P
8337	3104 311 06991	Cable 11P/280/11P
8337	3104 311 07451	Cable 11P/220/11P
8346	3104 311 06981	Cable 11P/180/11P
8346	3104 311 08161	Cable 11P/480/11P
8348	3104 311 00351	Cable 3P400/3P
8352	3104 311 05171	Cable 9p/860/9p
8352	3104 311 08661	Cable 9P/720/9P

2002	3198 034 02790	47pF 1% 50V 0402
2003	2238 780 15654	220nF 10% 16V 0805
2004	2238 780 15654	220nF 10% 16V 0805
2005	2238 586 59812	100nF 20% 50V 0603
2006	2238 586 59812	100nF 20% 50V 0603
2007	2238 586 59812	100nF 20% 50V 0603
2008	2238 586 59812	100nF 20% 50V 0603
2010	3198 034 04790	27pF 1% 50V 0402
2011	3198 034 04790	27pF 1% 50V 0402
2012	3198 034 04790	27pF 1% 50V 0402
2013	2020 021 91557	100µF 20% 16V
2016	4822 124 12095	100µF 20% 16V
2017	2238 586 59812	100nF 20% 50V 0603
2018	4822 126 14324	33pF 5% 50V 0402
2019	2238 586 59812	100nF 20% 50V 0603
2020	2238 869 15221	220pF 1% 50V 0402
2022	2238 586 59812	100nF 20% 50V 0603
2023	2238 586 59812	100nF 20% 50V 0603
2024	2238 586 59812	100nF 20% 50V 0603
2025	2238 586 59812	100nF 20% 50V 0603
2026	2238 586 59812	100nF 20% 50V 0603
2027	2238 586 59812	100nF 20% 50V 0603
2028	2238 586 59812	100nF 20% 50V 0603
2029	2238 586 59812	100nF 20% 50V 0603
2031	2238 586 59812	100nF 20% 50V 0603
2033	2238 869 75829	82pF 5% 50V 0402
2034	2238 869 75829	82pF 5% 50V 0402
2035	2238 869 75829	82pF 5% 50V 0402
2036	2238 869 75829	82pF 5% 50V 0402
2037	2238 869 75829	82pF 5% 50V 0402
2038	2238 586 59812	100nF 20% 50V 0603
2039	2238 586 59812	100nF 20% 50V 0603
2040	2238 586 59812	100nF 20% 50V 0603
2067	2238 586 59812	100nF 20% 50V 0603
2074	2238 586 59812	100nF 20% 50V 0603
2075	2238 586 59812	100nF 20% 50V 0603
2305	2238 586 59812	100nF 20% 50V 0603
2316	2238 586 59812	100nF 20% 50V 0603
2322	2238 586 59812	100nF 20% 50V 0603
2350	2238 586 59812	100nF 20% 50V 0603
2351	2238 586 59812	100nF 20% 50V 0603
2352	2238 586 59812	100nF 20% 50V 0603
2356	2238 586 59812	100nF 20% 50V 0603
2357	2238 586 59812	100nF 20% 50V 0603
2358	3198 035 03320	3.3nF 5% 50V 0402
2359	3198 034 01590	15pF 1% 50V 0402
2360	3198 034 01280	1.2pF 1% 50V 0402
2361	3198 034 01280	1.2pF 1% 50V 0402
2362	3198 034 01290	12pF 1% 50V 0402
2365	2238 586 59812	100nF 20% 50V 0603
2366	2238 586 59812	100nF 20% 50V 0603
2367	2238 586 59812	100nF 20% 50V 0603
2368	2238 586 59812	100nF 20% 50V 0603
2369	2238 586 59812	100nF 20% 50V 0603
2370	2238 586 59812	100nF 20% 50V 0603
2371	3198 035 14720	4.7nF 5% 25V 0402
2372	2022 552 05679	1µF 10% 16V 0805
2373	2238 586 59812	100nF 20% 50V 0603
2374	2022 552 05679	1µF 10% 16V 0805
2375	2238 787 15641	22nF 5% 16V 0402
2376	2238 586 59812	100nF 20% 50V 0603
2377	2020 021 91557	100µF 20% 16V
2378	2238 586 59812	100nF 20% 50V 0603
2384	2238 586 59812	100nF 20% 50V 0603
2387	2022 552 05679	1µF 10% 16V 0805
2390	2238 586 59812	100nF 20% 50V 0603
2391	2238 586 59812	100nF 20% 50V 0603
2392	2022 552 05679	1µF 10% 16V 0805
2394	2022 552 05679	1µF 10% 16V 0805
2403	2238 586 59812	100nF 20% 50V 0603
2404	2022 552 05679	1µF 10% 16V 0805
2405	3198 035 14720	4.7nF 5% 25V 0402
2406	2238 869 15221	220pF 1% 50V 0402
2407	4822 126 14524	68pF 5% 50V 0402
2408	3198 034 03380	3.3pF 1% 50V 0402
2409	2022 552 05679	1µF 10% 16V 0805
2410	2020 021 91557	100µF 20% 16V
2411	2238 586 59812	100nF 20% 50V 0603
2412	3198 035 14720	4.7nF 5% 25V 0402
2414	2020 021 91557	100µF 20% 16V
2415	2238 586 59812	100nF 20% 50V 0603
2416	2022 552 05679	1µF 10% 16V 0805
2417	4822 126 14583	470nF 10% 16V 0805
2418	3198 034 05680	5.6pF 1% 50V 0402
2425	2020 021 91557	100µF 20% 16V
2432	2238 586 59812	100nF 20% 50V 0603
2433	2238 586 59812	100nF 20% 50V 0603
2434	2238 586 59812	100nF 20% 50V 0603
2435	2020 552 96618	1nF 10% 50V 0402
2436	2022 552 05679	1µF 10% 16V 0805
2707	3198 034 02790	47pF 1% 50V 0402
2707	4822 126 14519	22pF 5% 50V 0402
2708	2238 586 59812	100nF 20% 50V 0603
2709	2238 586 59812	100nF 20% 50V 0603
2710	2238 586 59812	100nF 20% 50V 0603
2711	2238 586 59812	100nF 20% 50V 0603
2712	2238 586 59812	100nF 20% 50V 0603
2713	4822 126 14519	22pF 5% 50V 0402
2714	4822 126 14519	22pF 5% 50V 0402
2715	2020 021 91854	10µF 20% 16V
2716	2238 586 59812	100nF 20% 50V 0603
2717	2238 586 59812	100nF 20% 50V 0603
2718	3198 034 01590	15pF 1% 50V 0402
2719	3198 034 01590	15pF 1% 50V 0402
2720	3198 034 01590	15pF 1% 50V 0402
2721	2238 869 15101	100pF 5% 50V 0402
2722	2238 869 15101	100pF 5% 50V 0402
2723	2238 586 59812	100nF 20% 50V 0603
2725	2238 586 59812	100nF 20% 50V 0603
2726	2238 586 59812	100nF 20% 50V 0603
2727	2238 586 59812	100nF 20% 50V 0603
2728	2020 021 91854	10µF 20% 16V
2729	2238 586 59812	100nF 20% 50V 0603
2730	2020 021 91557	100µF 20% 16V
2731	2238 586 59812	100nF 20% 50V 0603
2732	2020 552 96618	1nF 10% 50V 0402
2733	2238 586 59812	100nF 20% 50V 0603
2734	2238 586 59812	100nF 20% 50V 0603
2735	2238 586 59812	100nF 20% 50V 0603
2736	2238 586 59812	100nF 20% 50V 0603
2738	2238 586 59812	100nF 20% 50V 0603
2739	2020 021 91557	100µF 20% 16V
2740	2238 787 15641	22nF 5% 16V 0402
2741	2238 787 15641	22nF 5% 16V 0402
2742	2238 787 15641	22nF 5% 16V 0402
2743	2238 586 59812	100nF 20% 50V 0603
2744	2238 586 59812	100nF 20% 50V 0603
2745	2238 586 59812	100nF 20% 50V 0603
2746	2238 586 59812	100nF 20% 50V 0603
2747	4822 126 14524	68pF 5% 50V 0402
2748	2238 586 59812	100nF 20% 50V 0603
2749	2238 586 59812	100nF 20% 50V 0603
2750	2020 552 96618	1nF 10% 50V 0402
2750	2238 586 59812	100nF 20% 50V 0603
2751	2020 552 96618	1nF 10% 50V 0402
2751	2238 586 59812	100nF 20% 50V 0603
2752	2020 552 96618	1nF 10% 50V 0402
2752	2238 586 59812	100nF 20% 50V 0603
2753	2020 552 96618	1nF 10% 50V 0402
2753	2238 586 59812	100nF 20% 50V 0603
2754	2020 552 96618	1nF 10% 50V 0402
2755	2020 552 96618	1nF 10% 50V 0402
2755	2238 586 59812	100nF 20% 50V 0603
2756	2020 552 96618	1nF 10% 50V 0402
2756	2238 586 59812	100nF 20% 50V 0603
2757	2238 787 15641	22nF 5% 16V 0402
2759	2020 552 96618	1nF 10% 50V 0402
2759	2238 586 59812	100nF 20% 50V 0603
2760	2238 586 59812	100nF 20% 50V 0603
2760	2238 787 15641	22nF 5% 16V 0402
2761	2238 586 59812	100nF 20% 50V 0603
2761	2238 787 15641	22nF 5% 16V 0402
2762	2238 586 59812	100nF 20% 50V 0603

2762	2238 787 15641	22nF 5% 16V 0402
2763	2238 586 59812	100nF 20% 50V 0603
2763	2238 787 15641	22nF 5% 16V 0402
2764	2238 586 59812	100nF 20% 50V 0603
2764	2238 787 15641	22nF 5% 16V 0402
2768	2238 586 59812	100nF 20% 50V 0603
2768	2238 787 15641	22nF 5% 16V 0402
2769	2020 552 96618	1nF 10% 50V 0402
2769	2238 586 59812	100nF 20% 50V 0603
2770	2020 552 96618	1nF 10% 50V 0402
2770	2238 586 59812	100nF 20% 50V 0603
2771	2020 552 96618	1nF 10% 50V 0402
2771	2238 586 59812	100nF 20% 50V 0603
2772	2238 586 59812	100nF 20% 50V 0603
2772	2238 787 15641	22nF 5% 16V 0402
2773	2020 552 96618	1nF 10% 50V 0402
2773	2238 586 59812	100nF 20% 50V 0603
2777	2020 552 96618	1nF 10% 50V 0402
2777	2238 586 59812	100nF 20% 50V 0603
2778	2020 552 96618	1nF 10% 50V 0402
2778	2238 586 59812	100nF 20% 50V 0603
2780	2020 552 96618	1nF 10% 50V 0402
2780	2238 586 59812	100nF 20% 50V 0603
2781	2020 552 96618	1nF 10% 50V 0402
2781	2238 586 59812	100nF 20% 50V 0603
2782	2020 552 96618	1nF 10% 50V 0402
2782	2238 586 59812	100nF 20% 50V 0603
2784	2238 586 59812	100nF 20% 50V 0603
2784	2238 787 15641	22nF 5% 16V 0402
2785	2238 586 59812	100nF 20% 50V 0603
2785	2238 787 15641	22nF 5% 16V 0402
2788	2238 586 59812	100nF 20% 50V 0603
2789	2238 586 59812	100nF 20% 50V 0603
2790	2238 586 59812	100nF 20% 50V 0603
2791	2238 586 59812	100nF 20% 50V 0603
2792	2238 586 59812	100nF 20% 50V 0603
2793	2238 586 59812	100nF 20% 50V 0603
2794	2020 552 96618	1nF 10% 50V 0402
2794	2238 586 59812	100nF 20% 50V 0603
2795	2020 552 96618	1nF 10% 50V 0402
2795	2238 586 59812	100nF 20% 50V 0603
2796	2020 552 96618	1nF 10% 50V 0402
2796	2238 586 59812	100nF 20% 50V 0603
2797	2020 552 96618	1nF 10% 50V 0402
2797	2238 586 59812	100nF 20% 50V 0603
2798	2020 552 96618	1nF 10% 50V 0402
2798	2238 586 59812	100nF 20% 50V 0603
2799	2020 552 96618	1nF 10% 50V 0402
2799	2238 586 59812	100nF 20% 50V 0603
2800	2238 586 59812	100nF 20% 50V 0603
2802	2238 586 59812	100nF 20% 50V 0603
2804	2238 586 59812	100nF 20% 50V 0603
2805	2020 552 96618	1nF 10% 50V 0402
2805	2238 586 59812	100nF 20% 50V 0603
2806	2238 586 59812	100nF 20% 50V 0603
2807	2238 586 59812	100nF 20% 50V 0603
2808	2020 552 96618	1nF 10% 50V 0402
2808	2238 586 59812	100nF 20% 50V 0603
2809	2020 552 96618	1nF 10% 50V 0402
2809	2238 586 59812	100nF 20% 50V 0603
2810	2238 586 59812	100nF 20% 50V 0603
2811	2238 586 59812	100nF 20% 50V 0603
2812	3198 031 02290	22Ω 5% 0.1W 0402
2813	2238 586 59812	100nF 20% 50V 0603
2817	2238 586 59812	100nF 20% 50V 0603
2819	2238 586 59812	100nF 20% 50V 0603
2821	2238 586 59812	100nF 20% 50V 0603
2821	2238 787 15641	22nF 5% 16V 0402
2822	2238 586 59812	100nF 20% 50V 0603
2822	2238 787 15641	22nF 5% 16V 0402
2823	2238 586 59812	100nF 20% 50V 0603
2824	2238 586 59812	100nF 20% 50V 0603
2825	2238 586 59812	100nF 20% 50V 0603
2826	2238 586 59812	100nF 20% 50V 0603
2827	2238 586 59812	100nF 20% 50V 0603
2829	2020 021 91557	100μF 20% 16V
2830	2238 586 59812	100nF 20% 50V 0603
2831	2238 586 59812	100nF 20% 50V 0603
2832	2238 586 59812	100nF 20% 50V 0603
2833	2238 586 59812	100nF 20% 50V 0603
2834	2238 586 59812	100nF 20% 50V 0603
2835	2238 586 59812	100nF 20% 50V 0603
2836	2238 586 59812	100nF 20% 50V 0603
2837	2238 869 15101	100pF 5% 50V 0402
2838	2238 869 15101	100pF 5% 50V 0402
2839	2238 869 15101	100pF 5% 50V 0402
2840	4822 126 14519	22pF 5% 50V 0402
2841	4822 126 14519	22pF 5% 50V 0402
2844	2238 586 59812	100nF 20% 50V 0603
2845	2238 586 59812	100nF 20% 50V 0603
2846	2238 586 59812	100nF 20% 50V 0603
2847	2020 021 91854	10μF 20% 16V
2848	2238 586 59812	100nF 20% 50V 0603
2849	2238 586 59812	100nF 20% 50V 0603
2850	2238 586 59812	100nF 20% 50V 0603
2851	2238 586 59812	100nF 20% 50V 0603
2852	2238 586 59812	100nF 20% 50V 0603
2853	2238 586 59812	100nF 20% 50V 0603
2854	2238 586 59812	100nF 20% 50V 0603
2855	2238 586 59812	100nF 20% 50V 0603
2856	2238 586 59812	100nF 20% 50V 0603
2857	2238 586 59812	100nF 20% 50V 0603
2858	2238 586 59812	100nF 20% 50V 0603
2859	2238 586 59812	100nF 20% 50V 0603
2860	2238 586 59812	100nF 20% 50V 0603
2861	2238 586 59812	100nF 20% 50V 0603
2862	2238 586 59812	100nF 20% 50V 0603
2863	2238 586 59812	100nF 20% 50V 0603
2864	2238 586 59812	100nF 20% 50V 0603
2865	2238 586 59812	100nF 20% 50V 0603
2866	2238 586 59812	100nF 20% 50V 0603
2867	2238 586 59812	100nF 20% 50V 0603
2868	2238 586 59812	100nF 20% 50V 0603
2869	2238 586 59812	100nF 20% 50V 0603
2870	2238 586 59812	100nF 20% 50V 0603
2871	2020 021 91557	100μF 20% 16V
2872	2238 586 59812	100nF 20% 50V 0603
2873	2238 586 59812	100nF 20% 50V 0603
2874	2238 586 59812	100nF 20% 50V 0603
2875	2238 586 59812	100nF 20% 50V 0603
2876	2238 586 59812	100nF 20% 50V 0603
2877	2238 586 59812	100nF 20% 50V 0603
2878	2238 586 59812	100nF 20% 50V 0603
2879	2238 586 59812	100nF 20% 50V 0603
2880	2238 586 59812	100nF 20% 50V 0603
2881	3198 034 02790	47pF 1% 50V 0402
2882	2238 586 59812	100nF 20% 50V 0603
2883	2238 586 59812	100nF 20% 50V 0603
2884	2238 586 59812	100nF 20% 50V 0603
2885	2238 586 59812	100nF 20% 50V 0603
2886	2238 586 59812	100nF 20% 50V 0603
2887	2238 586 59812	100nF 20% 50V 0603
2888	2238 586 59812	100nF 20% 50V 0603
2889	2020 021 91557	100μF 20% 16V
2890	2238 586 59812	100nF 20% 50V 0603
2891	2238 586 59812	100nF 20% 50V 0603
2892	2238 586 59812	100nF 20% 50V 0603
2893	2238 586 59812	100nF 20% 50V 0603
2894	2238 586 59812	100nF 20% 50V 0603
2895	2020 021 91854	10μF 20% 16V
2896	2020 021 91557	100μF 20% 16V
2897	2238 586 59812	100nF 20% 50V 0603
2898	2020 021 91854	10μF 20% 16V
2899	2238 586 59812	100nF 20% 50V 0603
2914	2238 586 59812	100nF 20% 50V 0603
2917	2238 586 59812	100nF 20% 50V 0603
2919	2020 021 91557	100μF 20% 16V
2920	2238 586 59812	100nF 20% 50V 0603
2921	2238 586 59812	100nF 20% 50V 0603
2922	2020 552 96628	10nF 10% 16V 0402
2923	2020 552 96628	10nF 10% 16V 0402
2924	2238 586 59812	100nF 20% 50V 0603
2925	2020 552 96618	1nF 10% 50V 0402
2926	2238 869 15101	100pF 5% 50V 0402
2927	2238 869 15101	100pF 5% 50V 0402
2928	2238 869 15101	100pF 5% 50V 0402
2937	2020 021 91557	100μF 20% 16V
2939	2020 021 91557	100μF 20% 16V
2A00	2020 552 96618	1nF 10% 50V 0402
2A01	2020 552 96618	1nF 10% 50V 0402
2A02	2022 552 05679	1μF 10% 16V 0805
2A03	2020 021 91557	100μF 20% 16V
2A04	2022 552 05679	1μF 10% 16V 0805
2A05	2020 021 91557	100μF 20% 16V
2A06	2020 552 96618	1nF 10% 50V 0402
2A07	2020 552 96618	1nF 10% 50V 0402
2A08	2022 552 05679	1μF 10% 16V 0805
2A10	2238 586 59812	100nF 20% 50V 0603
2A11	2238 586 59812	100nF 20% 50V 0603
2A12	2238 586 59812	100nF 20% 50V 0603
2A13	2238 586 59812	100nF 20% 50V 0603
2A14	2020 552 96618	1nF 10% 50V 0402
2A15	2020 021 91557	100μF 20% 16V
2A16	2238 586 59812	100nF 20% 50V 0603
2A17	2020 552 96618	1nF 10% 50V 0402
2A18	2020 021 91557	100μF 20% 16V
2A19	3198 034 02790	47pF 1% 50V 0402
2A20	2022 552 05679	1μF 10% 16V 0805
2A21	2238 586 59812	100nF 20% 50V 0603
2A22	2238 586 59812	100nF 20% 50V 0603
2A23	2238 586 59812	100nF 20% 50V 0603
2A24	2238 586 59812	100nF 20% 50V 0603
2A25	2238 869 15101	100pF 5% 50V 0402
2A26	2022 552 05679	1μF 10% 16V 0805
2A26	2238 586 59812	100nF 20% 50V 0603
2A27	2020 552 96618	1nF 10% 50V 0402
2A29	2238 869 15101	100pF 5% 50V 0402
2A30	2238 869 15101	100pF 5% 50V 0402
2A31	2022 552 05679	1μF 10% 16V 0805
2A31	2238 586 59812	100nF 20% 50V 0603
2A32	2238 869 15101	100pF 5% 50V 0402
2A33	2238 586 59812	100nF 20% 50V 0603
2A34	2238 586 59812	100nF 20% 50V 0603
2A35	2020 552 96618	1nF 10% 50V 0402
2A36	2238 869 15101	100pF 5% 50V 0402
2A37	2238 869 15101	100pF 5% 50V 0402
2A38	2022 552 05679	1μF 10% 16V 0805
2A39	2022 552 05679	1μF 10% 16V 0805
2A40	2238 586 59812	100nF 20% 50V 0603
2A41	2020 021 91854	10μF 20% 16V
2A42	2020 021 91854	10μF 20% 16V
2A43	2020 021 91854	10μF 20% 16V
2A44	2238 586 59812	100nF 20% 50V 0603
2A45	2238 586 59812	100nF 20% 50V 0603
2A46	2022 552 05679	1μF 10% 16V 0805
2A47	2020 552 96618	1nF 10% 50V 0402
2A47	2022 552 05679	1μF 10% 16V 0805
2A49	2022 552 05679	1μF 10% 16V 0805
2A50	2020 552 96618	1nF 10% 50V 0402
2A53	2022 552 05679	1μF 10% 16V 0805
2A54	2020 552 96618	1nF 10% 50V 0402
2A56	2022 552 05679	1μF 10% 16V 0805
2A59	2022 552 05679	1μF 10% 16V 0805
2A62	2022 552 05679	1μF 10% 16V 0805
2A67	4822 051 20008	Jumper 0805
2A71	4822 051 20008	Jumper 0805
2A79	2238 586 59812	100nF 20% 50V 0603
2A91	2238 869 15101	100pF 5% 50V 0402
2A92	2022 552 05679	1μF 10% 16V 0805
2A95	2238 869 15221	220pF 1% 50V 0402
2A99	2022 552 05679	1μF 10% 16V 0805
2AA5	2238 869 15101	100pF 5% 50V 0402
2AA6	2020 552 96618	1nF 10% 50V 0402
2AA7	2020 552 96618	1nF 10% 50V 0402
2AA9	3198 034 05680	5.6pF 1% 50V 0402
2AB0	3198 034 05680	5.6pF 1% 50V 0402
2AB2	2020 552 96618	1nF 10% 50V 0402
2AB3	2022 552 05679	1μF 10% 16V 0805
2AB4	2022 552 05679	1μF 10% 16V 0805
2AB5	2020 021 91854	10μF 20% 16V
2AB6	2020 552 96618	1nF 10% 50V 0402
2AB7	2020 552 96618	1nF 10% 50V 0402
2AB8	2022 552 05679	1μF 10% 16V 0805
2AF3	4822 124 12095	100μF 20% 16V
2AF4	2238 586 59812	100nF 20% 50V 0603
2C00	2238 586 59812	100nF 20% 50V 0603
2C01	2238 586 59812	100nF 20% 50V 0603
2C02	2238 586 59812	100nF 20% 50V 0603
2D04	2020 552 96618	1nF 10% 50V 0402
2D09	2238 586 59812	100nF 20% 50V 0603
2D10	2022 552 05679	1μF 10% 16V 0805
2D11	2020 552 96628	10nF 10% 16V 0402
2D12	2020 552 96628	10nF 10% 16V 0402
2E01	2238 586 59812	100nF 20% 50V 0603
2E02	2238 586 59812	100nF 20% 50V 0603
2E02	3198 035 71040	100nF 10% 16V 0402
2E03	2238 586 59812	100nF 20% 50V 0603
2E04	2238 586 59812	100nF 20% 50V 0603
2E06	2238 586 59812	100nF 20% 50V 0603
2E07	2238 586 59812	100nF 20% 50V 0603
2E08	2238 586 59812	100nF 20% 50V 0603
2E09	2238 586 59812	100nF 20% 50V 0603
2E10	2238 586 59812	100nF 20% 50V 0603
2E11	2238 586 59812	100nF 20% 50V 0603
2E12	2238 586 59812	100nF 20% 50V 0603
2E13	2238 586 59812	100nF 20% 50V 0603
2E14	2238 586 59812	100nF 20% 50V 0603
2E15	2238 586 59812	100nF 20% 50V 0603
2E16	2238 586 59812	100nF 20% 50V 0603
2E17	2238 586 59812	100nF 20% 50V 0603
2E18	2238 586 59812	100nF 20% 50V 0603
2E19	2238 586 59812	100nF 20% 50V 0603
2E20	2238 586 59812	100nF 20% 50V 0603
2E21	3198 017 34730	47nF 16V 0603
2E22	4822 126 14519	22pF 5% 50V 0402
2E23	3198 017 34730	47nF 16V 0603
2E24	4822 126 14519	22pF 5% 50V 0402
2E25	3198 017 34730	47nF 16V 0603
2E26	4822 126 14519	22pF 5% 50V 0402
2E27	2238 586 59812	100nF 20% 50V 0603
2E28	3198 017 34730	47nF 16V 0603
2E29	3198 017 33330	33nF 20% 16V 0603
2E29	4822 126 14549	33nF 16V 0603
2E30	3198 035 14720	4.7nF 5% 25V 0402
2E34	3198 035 03320	3.3nF 5% 50V 0402
2E35	2238 586 59812	100nF 20% 50V 0603
2E39	2238 869 15109	10pF 5% 50V 0402
2E41	2022 552 05679	1μF 10% 16V 0805
2E41	2238 586 59812	100nF 20% 50V 0603
2E42	2020 552 96628	10nF 10% 16V 0402
2E43	2238 586 59812	100nF 20% 50V 0603
2E49	2238 586 59812	100nF 20% 50V 0603

2E50	4822 124 23237	22µF 6.3V
2E50	4822 124 81058	47µF 20% 4V
2E51	2022 552 05679	1µF 10% 16V 0805
2E52	2238 586 59812	100nF 20% 50V 0603
2E54	2238 586 59812	100nF 20% 50V 0603
2E55	2022 552 05679	1µF 10% 16V 0805
2E56	2020 552 96628	10nF 10% 16V 0402
2E57	2020 552 96628	10nF 10% 16V 0402
2E58	2020 552 96628	10nF 10% 16V 0402
2E59	2020 552 96628	10nF 10% 16V 0402
2E62	2238 586 59812	100nF 20% 50V 0603
2E65	2238 586 59812	100nF 20% 50V 0603
2E66	2238 586 59812	100nF 20% 50V 0603
2E67	2238 586 59812	100nF 20% 50V 0603
2E68	2020 552 96628	10nF 10% 16V 0402
2E69	2020 552 96628	10nF 10% 16V 0402
2E70	2020 552 96628	10nF 10% 16V 0402
2E71	2020 552 96628	10nF 10% 16V 0402
2E72	2238 586 59812	100nF 20% 50V 0603
2E73	2238 586 59812	100nF 20% 50V 0603
2E74	2238 586 59812	100nF 20% 50V 0603
2E75	2238 586 59812	100nF 20% 50V 0603
2E77	2238 586 59812	100nF 20% 50V 0603
2E78	2238 586 59812	100nF 20% 50V 0603
2E79	2238 586 59812	100nF 20% 50V 0603
2E80	2238 586 59812	100nF 20% 50V 0603
2E81	2022 552 05679	1µF 10% 16V 0805
2E82	2238 586 59812	100nF 20% 50V 0603
2E83	2238 586 59812	100nF 20% 50V 0603
2E84	2238 586 59812	100nF 20% 50V 0603
2E86	2238 586 59812	100nF 20% 50V 0603
2E87	4822 124 12095	100µF 20% 16V
2E88	2238 869 15101	100pF 5% 50V 0402
2E89	2238 869 15101	100pF 5% 50V 0402
2E90	2238 869 15101	100pF 5% 50V 0402
2E91	2238 869 15101	100pF 5% 50V 0402
2E92	2238 869 15101	100pF 5% 50V 0402
2E93	2238 586 59812	100nF 20% 50V 0603
2E94	2238 586 59812	100nF 20% 50V 0603
2E96	2238 869 15101	100pF 5% 50V 0402
2E97	2238 869 15101	100pF 5% 50V 0402
2E98	2238 869 15101	100pF 5% 50V 0402
2E99	4822 124 81058	47µF 20% 4V
2I00	2238 869 15101	100pF 5% 50V 0402
2I10	2020 552 96628	10nF 10% 16V 0402
2I11	2022 552 05679	1µF 10% 16V 0805
2I12	2022 552 05679	1µF 10% 16V 0805
2I12	4822 126 14585	100nF 10% 0805 50V
2I15	2022 552 05679	1µF 10% 16V 0805
2I16	2238 869 15101	100pF 5% 50V 0402
2I17	2238 869 15101	100pF 5% 50V 0402
2I18	2238 869 15101	100pF 5% 50V 0402
2I19	2238 869 15101	100pF 5% 50V 0402
2I20	3198 035 03310	330pF 5% 50V 0402
2I21	2238 869 15101	100pF 5% 50V 0402
2I22	2238 869 15101	100pF 5% 50V 0402
2I23	2238 869 15101	100pF 5% 50V 0402
2I24	2238 869 15101	100pF 5% 50V 0402
2I25	3198 035 03310	330pF 5% 50V 0402
2I26	2238 869 15101	100pF 5% 50V 0402
2I27	2238 869 15101	100pF 5% 50V 0402
2I30	2238 869 15101	100pF 5% 50V 0402
2I32	4822 124 23002	10µF 16V
2I36	2238 869 15101	100pF 5% 50V 0402
2I38	2238 869 15101	100pF 5% 50V 0402
2I40	2238 586 59812	100nF 20% 50V 0603
2I46	2020 552 96618	1nF 10% 50V 0402
2I47	2020 552 96618	1nF 10% 50V 0402
2I50	2238 586 59812	100nF 20% 50V 0603
2I57	2238 869 15101	100pF 5% 50V 0402
2I58	2238 869 15101	100pF 5% 50V 0402
2I59	2238 586 59812	100nF 20% 50V 0603
2I64	2238 869 15101	100pF 5% 50V 0402
2I65	2238 869 15101	100pF 5% 50V 0402
2I69	2238 869 75829	82pF 5% 50V 0402
2I69	4822 126 14324	33pF 5% 50V 0402
2I70	2238 869 75829	82pF 5% 50V 0402
2I70	4822 126 14324	33pF 5% 50V 0402
2I86	2238 869 75829	82pF 5% 50V 0402
2I86	4822 126 14324	33pF 5% 50V 0402
2I87	2238 869 15101	100pF 5% 50V 0402
2I88	2238 869 15101	100pF 5% 50V 0402
2I89	2022 552 05679	1µF 10% 16V 0805
2I90	2022 552 05679	1µF 10% 16V 0805
2I91	2238 586 59812	100nF 20% 50V 0603
2I92	2022 552 05679	1µF 10% 16V 0805
2I93	2238 586 59812	100nF 20% 50V 0603
2I94	2238 586 59812	100nF 20% 50V 0603
2I95	2238 586 59812	100nF 20% 50V 0603
2I96	2022 552 05679	1µF 10% 16V 0805
2I97	2238 586 59812	100nF 20% 50V 0603
2I98	2238 586 59812	100nF 20% 50V 0603
2I99	2022 552 05679	1µF 10% 16V 0805
2I99	4822 124 23002	10µF 16V
2IA0	2022 552 05679	1µF 10% 16V 0805
2IA0	4822 124 23002	10µF 16V
2IA1	2022 552 05679	1µF 10% 16V 0805
2IA1	4822 124 23002	10µF 16V
2IA2	2022 552 05679	1µF 10% 16V 0805
2IA2	4822 124 23002	10µF 16V
2IA3	2020 552 96618	1nF 10% 50V 0402
2IA4	2022 552 05679	1µF 10% 16V 0805
2IA4	4822 126 14585	100nF 10% 0805 50V
2IA5	2020 021 91557	100µF 20% 16V
2IA9	2020 021 91557	100µF 20% 16V
2IB3	2238 586 59812	100nF 20% 50V 0603
2IB5	2022 552 05679	1µF 10% 16V 0805
2IB8	2238 586 59812	100nF 20% 50V 0603
2IB9	2238 586 59812	100nF 20% 50V 0603
2IC0	4822 124 23002	10µF 16V
2IC1	4822 124 23002	10µF 16V
2IC3	2238 586 59812	100nF 20% 50V 0603
2IC5	2238 586 59812	100nF 20% 50V 0603
2IC6	3198 034 04790	27pF 1% 50V 0402
2IC7	3198 034 04790	27pF 1% 50V 0402
2IC8	2022 552 05679	1µF 10% 16V 0805
2IC9	4822 126 13883	220pF 5% 50V
2IE1	2238 586 59812	100nF 20% 50V 0603
2IE2	2238 586 59812	100nF 20% 50V 0603
2IE3	2022 552 05679	1µF 10% 16V 0805
2IE4	2238 586 59812	100nF 20% 50V 0603
2IE5	2238 586 59812	100nF 20% 50V 0603
2IE6	2238 586 59812	100nF 20% 50V 0603
2IE7	2022 552 05679	1µF 10% 16V 0805
2IE8	2022 552 05679	1µF 10% 16V 0805
2IE9	2238 586 59812	100nF 20% 50V 0603
2IF1	2238 586 59812	100nF 20% 50V 0603
2IF2	2238 586 59812	100nF 20% 50V 0603
2IF3	2238 586 59812	100nF 20% 50V 0603
2IF4	4822 124 80151	47µF 16V
2IF5	2238 586 59812	100nF 20% 50V 0603
2IF8	2022 552 05679	1µF 10% 16V 0805
2IF8	4822 124 11946	22µF 20% 16V
2IF9	2022 552 05679	1µF 10% 16V 0805
2IF9	4822 124 11946	22µF 20% 16V
2IG1	2238 586 59812	100nF 20% 50V 0603
2IG2	5322 124 41945	22µF 20% 35V
2IG3	2238 586 59812	100nF 20% 50V 0603
2IG4	2238 586 59812	100nF 20% 50V 0603
2IG5	2238 586 59812	100nF 20% 50V 0603
2IG6	2238 586 59812	100nF 20% 50V 0603
2IG7	2238 586 59812	100nF 20% 50V 0603
2IG8	2238 586 59812	100nF 20% 50V 0603
2IG9	2238 586 59812	100nF 20% 50V 0603
2IH1	2238 586 59812	100nF 20% 50V 0603
2IH2	2238 586 59812	100nF 20% 50V 0603
2IH3	2020 552 96618	1nF 10% 50V 0402
2IH4	2022 552 05679	1µF 10% 16V 0805
2IH5	2238 586 59812	100nF 20% 50V 0603
2IH6	2022 552 05679	1µF 10% 16V 0805
2IH6	4822 124 11946	22µF 20% 16V
2IH7	2022 552 05679	1µF 10% 16V 0805
2IH7	4822 124 11946	22µF 20% 16V
2IH8	2022 552 05679	1µF 10% 16V 0805
2IH8	4822 124 11946	22µF 20% 16V
2IH9	2022 552 05679	1µF 10% 16V 0805
2IH9	4822 124 11946	22µF 20% 16V
2IJ4	2238 586 59812	100nF 20% 50V 0603
2IJ8	2022 552 05679	1µF 10% 16V 0805
2IJ9	2022 552 05679	1µF 10% 16V 0805
2IK1	2238 780 15654	220nF 10% 16V 0805
2IK5	2238 586 59812	100nF 20% 50V 0603
2IK6	2238 586 59812	100nF 20% 50V 0603
2IK7	2238 586 59812	100nF 20% 50V 0603
2IL0	2238 869 15109	10pF 5% 50V 0402
2IN8	2238 586 59812	100nF 20% 50V 0603
2IN9	2238 586 59812	100nF 20% 50V 0603
2IS6	4822 124 12095	100µF 20% 16V
2L00	4822 124 23237	22µF 6.3V
2L01	2238 586 59812	100nF 20% 50V 0603
2L02	2238 586 59812	100nF 20% 50V 0603
2L03	2238 586 59812	100nF 20% 50V 0603
2L04	2238 586 59812	100nF 20% 50V 0603
2L05	2238 586 59812	100nF 20% 50V 0603
2L06	2238 586 59812	100nF 20% 50V 0603
2L07	2238 586 59812	100nF 20% 50V 0603
2L08	2238 586 59812	100nF 20% 50V 0603
2L09	2238 586 59812	100nF 20% 50V 0603
2L10	2238 586 59812	100nF 20% 50V 0603
2L11	2238 586 59812	100nF 20% 50V 0603
2L12	2238 586 59812	100nF 20% 50V 0603
2L13	2238 586 59812	100nF 20% 50V 0603
2L14	2238 586 59812	100nF 20% 50V 0603
2L15	2238 586 59812	100nF 20% 50V 0603
2L16	2238 586 59812	100nF 20% 50V 0603
2L17	2238 586 59812	100nF 20% 50V 0603
2L19	4822 124 23237	22µF 6.3V
2L20	2238 586 59812	100nF 20% 50V 0603
2L21	2238 586 59812	100nF 20% 50V 0603
2L25	2238 586 59812	100nF 20% 50V 0603
2L26	3198 017 33330	33nF 20% 16V 0603
2L26	4822 126 14549	33nF 16V 0603
2L27	3198 035 14720	4.7nF 5% 25V 0402
2L28	3198 034 03990	39pF 1% 50V 0402
2L28	4822 126 14519	22pF 5% 50V 0402
2L29	3198 034 03990	39pF 1% 50V 0402
2L29	4822 126 14519	22pF 5% 50V 0402
2L30	3198 034 03990	39pF 1% 50V 0402
2L30	4822 126 14519	22pF 5% 50V 0402
2L31	3198 017 34730	47nF 16V 0603
2L32	3198 035 03320	3.3nF 5% 50V 0402
2L33	2238 586 59812	100nF 20% 50V 0603
2L34	2238 586 59812	100nF 20% 50V 0603
2L51	4822 124 23237	22µF 6.3V
2L52	3198 017 34730	47nF 16V 0603
2L54	3198 017 34730	47nF 16V 0603
2L56	2020 552 96618	1nF 10% 50V 0402
2L57	3198 017 34730	47nF 16V 0603
2L58	4822 124 23237	22µF 6.3V
2L60	3198 034 04790	27pF 1% 50V 0402
2P80	4822 124 12095	100µF 20% 16V
2P81	2238 586 59812	100nF 20% 50V 0603
2T01	3198 032 28210	220µF 20% 6.3V
2T04	2238 586 15641	22nF 10% 50V 0603
2T05	3198 032 28210	220µF 20% 6.3V
2T06	2020 552 96628	10nF 10% 16V 0402
2T09	3198 017 34730	47nF 16V 0603
2T12	2238 586 59812	100nF 20% 50V 0603
2T13	2020 552 96628	10nF 10% 16V 0402
2T13	5322 126 11583	10nF 10% 50V 0603
2T15	2022 552 05679	1µF 10% 16V 0805
2T21	3198 032 28210	220µF 20% 6.3V
2U03	2022 552 05679	1µF 10% 16V 0805
2U04	4822 126 14583	470nF 10% 16V 0805
2U05	2020 552 96618	1nF 10% 50V 0402
2U06	2022 552 05635	22µF 10% 16V
2U07	2238 869 75829	82pF 5% 50V 0402
2U08	2022 552 05635	22µF 10% 16V
2U09	2020 552 96618	1nF 10% 50V 0402
2U10	2022 552 05635	22µF 10% 16V
2U11	2020 552 96618	1nF 10% 50V 0402
2U12	2020 552 96628	10nF 10% 16V 0402
2U13	2238 780 15654	220nF 10% 16V 0805
2U14	4822 126 14583	470nF 10% 16V 0805
2U15	4822 124 12095	100µF 20% 16V
2U16	3198 035 14720	4.7nF 5% 25V 0402
2U17	4822 126 14583	470nF 10% 16V 0805
2U18	3198 034 01210	120pF 1% 50V 0402
2U19	2238 586 59812	100nF 20% 50V 0603
2U20	2022 552 05679	1µF 10% 16V 0805
2U21	4822 126 14583	470nF 10% 16V 0805
2U22	2022 552 05679	1µF 10% 16V 0805
2U23	4822 124 12095	100µF 20% 16V
2U24	2020 552 96618	1nF 10% 50V 0402
2U25	2238 586 59812	100nF 20% 50V 0603
2U26	2238 586 59812	100nF 20% 50V 0603
2U27	3198 035 26820	6.8nF 10% 16V 0402
2U28	3198 035 26820	6.8nF 10% 16V 0402
2U30	3198 034 01210	120pF 1% 50V 0402
2U31	4822 124 12095	100µF 20% 16V
2U32	3198 035 03320	3.3nF 5% 50V 0402
2U33	2022 552 05679	1µF 10% 16V 0805
2U34	2238 787 15641	22nF 5% 16V 0402
2U35	2022 552 05679	1µF 10% 16V 0805
2U36	2238 586 59812	100nF 20% 50V 0603
2U37	2020 552 96623	2.2nF 10% 50V 0402
2U39	2238 586 59812	100nF 20% 50V 0603
2U40	2020 552 96623	2.2nF 10% 50V 0402
2U40	4822 126 14238	2.2nF 50V 0603
2U41	3198 035 26820	6.8nF 10% 16V 0402
2U42	3198 017 34730	47nF 16V 0603
2V11	3198 035 04710	470pF 50V 0402
2V12	3198 035 04710	470pF 50V 0402
2Y00	2238 869 15101	100pF 5% 50V 0402
2Y01	2238 869 15101	100pF 5% 50V 0402
2Y02	2238 869 15101	100pF 5% 50V 0402
2Y03	2238 869 15101	100pF 5% 50V 0402
2Y04	2238 869 15101	100pF 5% 50V 0402
2Y05	2238 869 15101	100pF 5% 50V 0402
2Y07	2238 869 15101	100pF 5% 50V 0402
2Y09	2238 869 15101	100pF 5% 50V 0402
2Y10	2238 869 15101	100pF 5% 50V 0402
2Y12	2238 869 15101	100pF 5% 50V 0402
2Y13	2238 586 59812	100nF 20% 50V 0603
2Y14	2238 869 15101	100pF 5% 50V 0402
2Y15	2238 869 15101	100pF 5% 50V 0402
2Y16	2238 869 15101	100pF 5% 50V 0402
2Y17	2238 869 15101	100pF 5% 50V 0402
2Y18	2238 869 15101	100pF 5% 50V 0402
2Y19	2238 869 15101	100pF 5% 50V 0402
2Y23	2238 869 15101	100pF 5% 50V 0402
2Y25	2238 869 15101	100pF 5% 50V 0402

2Y26	2238 869 15101	100pF 5% 50V 0402
2Y27	2020 552 96618	1nF 10% 50V 0402
2Y28	2020 552 96618	1nF 10% 50V 0402
2Y29	2020 552 96618	1nF 10% 50V 0402
2Y30	4822 124 12095	100μF 20% 16V
2Y31	4822 124 12095	100μF 20% 16V
2Y32	2020 552 96618	1nF 10% 50V 0402
2Y33	2020 552 96618	1nF 10% 50V 0402
2Y34	2238 869 15101	100pF 5% 50V 0402
2Y36	2238 869 15101	100pF 5% 50V 0402
2Y37	2238 869 15101	100pF 5% 50V 0402
2Y38	2238 869 15101	100pF 5% 50V 0402
2Y39	2238 869 15101	100pF 5% 50V 0402
2Y40	2238 869 15101	100pF 5% 50V 0402
2Y41	2238 869 15101	100pF 5% 50V 0402
2Y42	2238 869 15101	100pF 5% 50V 0402
2Y43	2238 869 15101	100pF 5% 50V 0402
2Y49	2238 869 15101	100pF 5% 50V 0402
2Y50	2238 869 15101	100pF 5% 50V 0402
2Y51	2238 869 15101	100pF 5% 50V 0402
2Y52	3198 035 71040	100nF 10% 16V 0402
2Y53	2238 869 15101	100pF 5% 50V 0402
2Z44	4822 126 14519	22pF 5% 50V 0402
2Z45	4822 126 14519	22pF 5% 50V 0402
2Z46	4822 126 14519	22pF 5% 50V 0402
2Z47	4822 126 14519	22pF 5% 50V 0402
2Z48	4822 126 14519	22pF 5% 50V 0402
2Z49	4822 126 14519	22pF 5% 50V 0402
2Z50	4822 126 14519	22pF 5% 50V 0402
2Z51	4822 126 14519	22pF 5% 50V 0402
2Z52	4822 126 14519	22pF 5% 50V 0402
2Z53	4822 126 14519	22pF 5% 50V 0402
2Z57	4822 117 13605	Jumper 0402
2Z58	2238 869 15101	100pF 5% 50V 0402
2Z58	4822 117 13605	Jumper 0402
2Z59	2238 869 15101	100pF 5% 50V 0402
2Z59	4822 117 13605	Jumper 0402
2Z60	2238 869 15101	100pF 5% 50V 0402
2Z61	2238 869 15101	100pF 5% 50V 0402
2Z62	2238 869 15101	100pF 5% 50V 0402
2Z62	4822 117 13605	Jumper 0402

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3001	3198 031 04720	4.7kΩ 5% 0402
3002	3198 031 04720	4.7kΩ 5% 0402
3003	4822 117 13525	24kΩ 1% 0.62W 0603
3005	4822 117 13606	10kΩ 5% 0.01W 0402
3006	4822 117 13543	470Ω 5% 0402
3007	2350 033 10471	4 x 470Ω 5%
3008	2350 033 10101	4 x 100Ω 5%
3008	2350 033 11221	4 x 220Ω 5%
3009	3198 031 01810	180Ω 5% 0402
3009	4822 117 13606	10kΩ 5% 0.01W 0402
3010	4822 117 13606	10kΩ 5% 0.01W 0402
3011	3198 031 04720	4.7kΩ 5% 0402
3012	2350 033 10101	4 x 100Ω 5%
3013	4822 117 13606	10kΩ 5% 0.01W 0402
3014	3198 031 06820	6.8kΩ 5% 0.01W 0402
3015	3198 031 04740	470 kΩ 5% 0402
3016	2322 706 71502	1.5kΩ 1% 0402
3017	3198 031 04720	4.7kΩ 5% 0402
3018	4822 117 13606	10kΩ 5% 0.01W 0402
3019	3198 031 04720	4.7kΩ 5% 0402
3020	4822 117 13606	10kΩ 5% 0.01W 0402
3021	4822 117 13606	10kΩ 5% 0.01W 0402
3024	3198 031 02730	27kΩ 5% 0402
3025	4822 117 13596	220Ω 5% 0.01W 0402
3026	3198 031 04720	4.7kΩ 5% 0402
3027	3198 031 04730	47Ω 5% 0402
3029	2350 033 10101	4 x 100Ω 5%
3031	2350 033 10101	4 x 100Ω 5%
3033	4822 117 11297	100kΩ 5% 0.1W
3033	4822 117 13606	10kΩ 5% 0.01W 0402
3034	2350 033 10101	4 x 100Ω 5%
3035	2350 033 10101	4 x 100Ω 5%
3038	4822 117 13606	10kΩ 5% 0.01W 0402
3039	3198 031 01810	180Ω 5% 0402
3046	2350 033 10101	4 x 100Ω 5%
3047	4822 051 30008	Jumper 0603
3048	2350 033 10101	4 x 100Ω 5%
3049	2350 033 10101	4 x 100Ω 5%
3050	2350 033 10101	4 x 100Ω 5%
3051	2350 033 10101	4 x 100Ω 5%
3052	2350 033 10101	4 x 100Ω 5%
3053	4822 117 13606	10kΩ 5% 0.01W 0402
3054	2350 033 10101	4 x 100Ω 5%
3055	2350 033 10101	4 x 100Ω 5%
3056	2350 033 10101	4 x 100Ω 5%
3057	2350 033 10101	4 x 100Ω 5%
3059	2322 704 66201	620Ω 1% 0603
3061	2350 033 10101	4 x 100Ω 5%
3062	4822 117 13606	10kΩ 5% 0.01W 0402
3064	2350 033 10101	4 x 100Ω 5%
3065	3198 031 04720	4.7kΩ 5% 0402
3066	3198 031 04730	47Ω 5% 0402
3067	3198 031 04740	470 kΩ 5% 0402
3069	3198 031 01820	1.8kΩ 5% 0.01W 0402
3072	2350 033 10101	4 x 100Ω 5%
3073	2350 033 10471	4 x 470Ω 5%
3074	2350 033 10471	4 x 470Ω 5%
3076	2350 033 10471	4 x 470Ω 5%
3077	3198 031 04720	4.7kΩ 5% 0402
3078	2350 033 10471	4 x 470Ω 5%
3079	3198 031 01820	1.8kΩ 5% 0.01W 0402
3080	4822 117 13606	10kΩ 5% 0.01W 0402
3081	4822 117 13543	470Ω 5% 0402
3082	2350 033 10101	4 x 100Ω 5%
3083	2350 033 10101	4 x 100Ω 5%
3084	4822 117 13606	10kΩ 5% 0.01W 0402
3085	2350 033 10101	4 x 100Ω 5%
3086	2350 033 10101	4 x 100Ω 5%
3087	4822 117 13545	100Ω 1% 0402
3088	3198 031 01820	1.8kΩ 5% 0.01W 0402
3089	4822 117 13545	100Ω 1% 0402
3090	2350 033 10471	4 x 470Ω 5%
3091	4822 051 30008	Jumper 0603
3092	3198 031 01820	1.8kΩ 5% 0.01W 0402
3093	4822 117 13606	10kΩ 5% 0.01W 0402
3097	4822 117 13543	470Ω 5% 0402
3099	2350 033 10471	4 x 470Ω 5%
3100	4822 117 13596	220Ω 5% 0.01W 0402
3101	4822 117 13596	220Ω 5% 0.01W 0402
3102	2350 033 10101	4 x 100Ω 5%
3103	4822 117 13543	470Ω 5% 0402
3304▲	2322 750 63908	3.9Ω 5% Fuse 1206
3370	4822 117 13545	100Ω 1% 0402
3371	4822 117 13546	47Ω 5% 0402
3372	4822 117 13543	470Ω 5% 0402
3376	4822 117 13545	100Ω 1% 0402
3377	4822 117 13545	100Ω 1% 0402
3378	3198 031 01530	15kΩ 5% 0.01W 0402
3380	4822 117 13545	100Ω 1% 0402
3382	4822 117 13543	470Ω 5% 0402
3385	4822 117 13543	470Ω 5% 0402
3393	4822 117 11297	100kΩ 5% 0.1W
3400▲	4822 117 11152	4.7Ω 5%
3402▲	2322 750 63908	3.9Ω 5% Fuse 1206
3404	3198 031 05610	560Ω 5% 0.01W 0402
3405	4822 117 13548	1kΩ 5% 0402
3406	2322 705 70279	27Ω 5% 0402
3408	4822 117 13545	100Ω 1% 0402
3411	3198 031 02720	2.7kΩ 5% 0.01W 0402
3412▲	4822 117 11152	4.7Ω 5%
3413	3198 031 02710	270Ω 5% 0.1W 0402
3414	3198 031 04720	4.7kΩ 5% 0402
3415	4822 117 13602	2.2kΩ 5% 0.01W 0402
3418	3198 031 03910	390Ω 1% 0402
3419	3198 031 03390	33Ω 1% 0402
3422	4822 117 13548	1kΩ 5% 0402
3435	3198 031 04720	4.7kΩ 5% 0402
3436	3198 031 01810	180Ω 5% 0402
3437	4822 117 13543	470Ω 5% 0402
3439	4822 117 13597	330Ω 5% 0402 0.01W
3441	3198 031 05620	5.6kΩ 5% 0.01W 0402
3445	4822 117 13543	470Ω 5% 0402
3463	3198 031 04720	4.7kΩ 5% 0402
3473	4822 117 13548	1kΩ 5% 0402
3474	3198 031 01090	10Ω 5% 0.01W 0402
3475▲	5322 117 11726	10Ω 5%
3476	3198 031 05610	560Ω 5% 0.01W 0402
3700	3198 031 02290	22Ω 5% 0.1W 0402
3701	4822 117 13548	1kΩ 5% 0402
3702	3198 031 01090	10Ω 5% 0.01W 0402
3703	3198 031 04720	4.7kΩ 5% 0402
3706	4822 117 13545	100Ω 1% 0402
3707	4822 117 13545	100Ω 1% 0402
3709	4822 117 13545	100Ω 1% 0402
3710	4822 117 13545	100Ω 1% 0402
3712	3198 031 04730	47Ω 5% 0402
3713	3198 031 01810	180Ω 5% 0402
3714	3198 031 01810	180Ω 5% 0402
3715	3198 031 01810	180Ω 5% 0402
3716	4822 117 11297	100kΩ 5% 0.1W
3717	4822 117 11297	100kΩ 5% 0.1W
3718	4822 117 11297	100kΩ 5% 0.1W
3719	3198 031 03320	3.3kΩ 5% 0402
3720	4822 117 13606	10kΩ 5% 0.01W 0402
3721	4822 117 13545	100Ω 1% 0402
3722	4822 117 13548	1kΩ 5% 0402
3724	4822 117 13545	100Ω 1% 0402
3725	3198 031 03320	3.3kΩ 5% 0402
3726	3198 031 01220	1.2kΩ 5% 0.01W 0402
3727	3198 031 01510	150Ω 5% 0.01W 0402
3728	3198 031 01510	150Ω 5% 0.01W 0402
3729	4822 117 13605	Jumper 0402
3730	3198 031 05610	560Ω 5% 0.01W 0402
3730	3198 031 06810	680Ω 5% 0.01W 0402
3732	3198 031 04730	47Ω 5% 0402
3733	4822 117 13548	1kΩ 5% 0402
3734	4822 117 13545	100Ω 1% 0402
3736	4822 117 13545	100Ω 1% 0402
3737	4822 117 13548	1kΩ 5% 0402
3738	4822 117 13548	1kΩ 5% 0402
3739	3198 031 01230	12kΩ 5% 0402
3740	3198 031 04720	4.7kΩ 5% 0402
3742	4822 117 13601	22kΩ 5% 0402
3743	4822 117 13606	10kΩ 5% 0.01W 0402
3744	4822 117 13602	2.2kΩ 5% 0.01W 0402
3745	4822 117 13548	1kΩ 5% 0402
3746	3198 031 03920	3.9kΩ 5% 0402
3747	3198 031 04730	47Ω 5% 0402
3748	2322 705 70124	120kΩ 5% 0402
3749	3198 031 03920	3.9kΩ 5% 0402
3750	3198 031 03920	3.9kΩ 5% 0402
3751	3198 031 03320	3.3kΩ 5% 0402
3752	4822 117 13605	Jumper 0402
3753	4822 117 13605	Jumper 0402
3754	4822 117 13545	100Ω 1% 0402
3755	3198 031 04720	4.7kΩ 5% 0402
3756	4822 117 13606	10kΩ 5% 0.01W 0402
3757	3198 031 01510	150Ω 5% 0.01W 0402
3758	3198 031 04720	4.7kΩ 5% 0402
3759	4822 117 13596	220Ω 5% 0.01W 0402
3762	3198 031 03390	33Ω 1% 0402
3762	3198 031 06890	68Ω 5% 0402
3763	3198 031 03390	33Ω 1% 0402
3763	3198 031 06890	68Ω 5% 0402
3764	3198 031 03390	33Ω 1% 0402
3764	3198 031 06890	68Ω 5% 0402
3766	4822 117 13548	1kΩ 5% 0402
3767	3198 031 03390	33Ω 1% 0402
3767	3198 031 06890	68Ω 5% 0402
3768	3198 031 03390	33Ω 1% 0402
3768	3198 031 06890	68Ω 5% 0402
3769	3198 031 03390	33Ω 1% 0402
3769	3198 031 06890	68Ω 5% 0402
3770	3198 031 03390	33Ω 1% 0402
3770	3198 031 06890	68Ω 5% 0402
3771	3198 031 07590	75Ω 5% 0402
3772	3198 031 07590	75Ω 5% 0402
3773	3198 031 07590	75Ω 5% 0402
3774	3198 031 03390	33Ω 1% 0402
3774	3198 031 06890	68Ω 5% 0402
3775	3198 031 03390	33Ω 1% 0402
3775	3198 031 06890	68Ω 5% 0402
3776	3198 031 07590	75Ω 5% 0402
3777	3198 031 03390	33Ω 1% 0402
3777	3198 031 06890	68Ω 5% 0402
3778	3198 031 04720	4.7kΩ 5% 0402
3779	3198 031 03390	33Ω 1% 0402
3779	3198 031 06890	68Ω 5% 0402
3780	3198 031 03390	33Ω 1% 0402
3780	3198 031 06890	68Ω 5% 0402
3781	3198 031 03390	33Ω 1% 0402
3781	3198 031 06890	68Ω 5% 0402
3782	4822 117 13548	1kΩ 5% 0402
3784	3198 031 03390	33Ω 1% 0402
3784	3198 031 06890	68Ω 5% 0402
3792	3198 031 01510	150Ω 5% 0.01W 0402
3793	4822 117 13602	2.2kΩ 5% 0.01W 0402
3794	3198 031 07590	75Ω 5% 0402
3795	3198 031 01510	150Ω 5% 0.01W 0402
3797	3198 031 04720	4.7kΩ 5% 0402
3800	3198 031 07590	75Ω 5% 0402
3801	3198 031 01510	150Ω 5% 0.01W 0402
3802	3198 031 01510	150Ω 5% 0.01W 0402
3803	3198 031 03390	33Ω 1% 0402
3803	3198 031 06890	68Ω 5% 0402
3804	3198 031 03390	33Ω 1% 0402
3804	3198 031 06890	68Ω 5% 0402
3805	4822 117 13545	100Ω 1% 0402
3811	3198 031 07590	75Ω 5% 0402
3812	3198 031 07590	75Ω 5% 0402
3814	3198 031 07590	75Ω 5% 0402
3815	3198 031 07590	75Ω 5% 0402
3817	3198 031 07590	75Ω 5% 0402
3818	3198 031 07590	75Ω 5% 0402
3820	3198 031 04720	4.7kΩ 5% 0402
3821	3198 031 03390	33Ω 1% 0402
3823	3198 031 06890	68Ω 5% 0402
3826	4822 117 13545	100Ω 1% 0402
3827	4822 117 13545	100Ω 1% 0402
3828	4822 117 13605	Jumper 0402
3829	4822 117 13545	100Ω 1% 0402
3830	3198 031 06890	68Ω 5% 0402
3831	3198 031 06890	68Ω 5% 0402
3832	3198 031 06890	68Ω 5% 0402
3833	3198 031 06890	68Ω 5% 0402
3834	3198 031 06890	68Ω 5% 0402
3835	3198 031 06890	68Ω 5% 0402

3836	3198 031 06890	68Ω 5% 0402
3837	3198 031 06890	68Ω 5% 0402
3838	3198 031 06890	68Ω 5% 0402
3839	3198 031 06890	68Ω 5% 0402
3840	3198 031 06890	68Ω 5% 0402
3841	3198 031 06890	68Ω 5% 0402
3842	3198 031 06890	68Ω 5% 0402
3843	3198 031 06890	68Ω 5% 0402
3844	3198 031 06890	68Ω 5% 0402
3845	3198 031 06890	68Ω 5% 0402
3846	3198 031 04720	4.7kΩ 5% 0402
3850	2322 705 87829	82Ω 5% 0402
3853	3198 031 04730	47Ω 5% 0402
3855	3198 031 04720	4.7kΩ 5% 0402
3856	3198 031 01090	10Ω 5% 0.01W 0402
3857	3198 031 01090	10Ω 5% 0.01W 0402
3858	3198 031 01090	10Ω 5% 0.01W 0402
3859	3198 031 01090	10Ω 5% 0.01W 0402
3860	3198 031 01090	10Ω 5% 0.01W 0402
3861	3198 031 01090	10Ω 5% 0.01W 0402
3864	4822 117 13545	100Ω 1% 0402
3865	4822 117 13545	100Ω 1% 0402
3867	4822 117 13545	100Ω 1% 0402
3868	4822 117 13545	100Ω 1% 0402
3869	4822 117 13545	100Ω 1% 0402
3870	4822 117 13545	100Ω 1% 0402
3871	4822 117 13545	100Ω 1% 0402
3872	4822 117 13545	100Ω 1% 0402
3873	4822 117 13545	100Ω 1% 0402
3875	4822 117 13545	100Ω 1% 0402
3880	3198 031 04730	47Ω 5% 0402
3881	3198 031 04730	47Ω 5% 0402
3882	3198 031 04730	47Ω 5% 0402
3883	3198 031 04730	47Ω 5% 0402
3884	3198 031 04730	47Ω 5% 0402
3885	4822 117 13548	1kΩ 5% 0402
3886	4822 117 13548	1kΩ 5% 0402
3887	4822 117 13548	1kΩ 5% 0402
3888	4822 117 13548	1kΩ 5% 0402
3889	4822 117 13548	1kΩ 5% 0402
3890	4822 117 13548	1kΩ 5% 0402
3891	4822 117 13548	1kΩ 5% 0402
3894	3198 031 01510	150Ω 5% 0.01W 0402
3896	4822 117 13605	Jumper 0402
3900	3198 031 06890	68Ω 5% 0402
3901	3198 031 06890	68Ω 5% 0402
3902	3198 031 06890	68Ω 5% 0402
3903	4822 117 11297	100kΩ 5% 0.1W
3905	3198 031 04720	4.7kΩ 5% 0402
3909	4822 117 13545	100Ω 1% 0402
3911	2350 033 11689	4x 68Ω 5% Netw.
3912	2350 033 11689	4x 68Ω 5% Netw.
3913	2350 033 11229	4x 22Ω 5% Netw.
3914	2350 033 11229	4x 22Ω 5% Netw.
3915	2350 033 11229	4x 22Ω 5% Netw.
3916	2350 033 11229	4x 22Ω 5% Netw.
3917	2350 033 11229	4x 22Ω 5% Netw.
3918	3198 031 06890	68Ω 5% 0402
3919	3198 031 06890	68Ω 5% 0402
3921	3198 031 06890	68Ω 5% 0402
3A00	4822 117 13601	22kΩ 5% 0402
3A01	4822 117 13606	10kΩ 5% 0.01W 0402
3A02	3198 031 04730	47Ω 5% 0402
3A03⚠	4822 117 13568	6.8Ω 5% 1206
3A04	4822 117 13601	22kΩ 5% 0402
3A05	4822 117 13601	22kΩ 5% 0402
3A06	4822 117 11297	100kΩ 5% 0.1W
3A07	4822 117 11297	100kΩ 5% 0.1W
3A09	4822 117 13601	22kΩ 5% 0402
3A11	4822 117 11297	100kΩ 5% 0.1W
3A12	3198 031 04730	47Ω 5% 0402
3A13	3198 031 04730	47Ω 5% 0402
3A14	3198 031 04730	47Ω 5% 0402
3A15	4822 117 11297	100kΩ 5% 0.1W
3A16	4822 117 13545	100Ω 1% 0402
3A17	4822 117 13545	100Ω 1% 0402
3A18	3198 031 06830	68kΩ 5% 0.01W 0402
3A19	4822 117 13545	100Ω 1% 0402
3A20	4822 117 11297	100kΩ 5% 0.1W
3A21	3198 031 02730	27kΩ 5% 0402
3A21	3198 031 06830	68kΩ 5% 0.01W 0402
3A22	4822 117 11297	100kΩ 5% 0.1W
3A23	3198 031 06830	68kΩ 5% 0.01W 0402
3A24	3198 031 06810	680Ω 5% 0.01W 0402
3A24	4822 117 13545	100Ω 1% 0402
3A26	3198 031 06830	68kΩ 5% 0.01W 0402
3A27	3198 031 06820	6.8kΩ 5% 0.01W 0402
3A28	3198 031 06820	6.8kΩ 5% 0.01W 0402
3A40	3198 031 01830	18kΩ 5% 0.01W 0402
3A45	3198 031 04730	47Ω 5% 0402
3A46	3198 031 01530	15kΩ 5% 0.01W 0402
3A47	3198 031 04730	47Ω 5% 0402
3A48	4822 117 11297	100kΩ 5% 0.1W
3A49	3198 031 01830	18kΩ 5% 0.01W 0402
3A51	3198 031 01530	15kΩ 5% 0.01W 0402
3A52	3198 031 03930	39kΩ 5% 0402
3A52	3198 031 05630	56kΩ 5% 0402
3A53	3198 031 03930	39kΩ 5% 0402
3A53	3198 031 05630	56kΩ 5% 0402
3A55	4822 117 13597	330Ω 5% 0402 0.01W
3A60	4822 117 11297	100kΩ 5% 0.1W
3A61	4822 117 13597	330Ω 5% 0402 0.01W
3A62	4822 117 11297	100kΩ 5% 0.1W
3A63	4822 117 13601	22kΩ 5% 0402
3A64	3198 031 04730	47Ω 5% 0402
3A64	4822 117 13597	330Ω 5% 0402 0.01W
3A65	3198 031 01050	1MΩ 5% 0402
3A65	4822 117 11297	100kΩ 5% 0.1W
3A66	4822 117 11297	100kΩ 5% 0.1W
3A67	4822 117 13543	470Ω 5% 0402
3C00	4822 117 13602	2.2kΩ 5% 0.01W 0402
3C01	3198 031 01090	10Ω 5% 0.01W 0402
3C03	4822 117 13606	10kΩ 5% 0.01W 0402
3C04	4822 117 13606	10kΩ 5% 0.01W 0402
3C05	4822 117 13543	470Ω 5% 0402
3C08	4822 051 30103	10kΩ 5% 0.062W
3C10	4822 117 13545	100Ω 1% 0402
3C11	4822 117 13545	100Ω 1% 0402
3C12	3198 031 06890	68Ω 5% 0402
3E00	4822 117 13606	10kΩ 5% 0.01W 0402
3E01	4822 117 13548	1kΩ 5% 0402
3E02	4822 117 13548	1kΩ 5% 0402
3E03	4822 117 13548	1kΩ 5% 0402
3E04	4822 117 13548	1kΩ 5% 0402
3E05	3198 031 01520	1.2kΩ 5% 0.01W 0402
3E06	4822 117 13545	100Ω 1% 0402
3E07	4822 117 13545	100Ω 1% 0402
3E08	4822 117 13545	100Ω 1% 0402
3E11	4822 117 13543	470Ω 5% 0402
3E12	4822 117 13543	470Ω 5% 0402
3E14	4822 117 13548	1kΩ 5% 0402
3E16	3198 031 02720	2.7kΩ 5% 0.01W 0402
3E18	4822 117 13545	100Ω 1% 0402
3E19	4822 117 13545	100Ω 1% 0402
3E37	4822 117 13545	100Ω 1% 0402
3E50	4822 117 13606	10kΩ 5% 0.01W 0402
3E51	4822 117 13606	10kΩ 5% 0.01W 0402
3E52	4822 117 13606	10kΩ 5% 0.01W 0402
3E53	4822 117 13606	10kΩ 5% 0.01W 0402
3E54	4822 117 13546	47Ω 5% 0402
3E55	4822 117 13606	10kΩ 5% 0.01W 0402
3E56	4822 117 13603	33kΩ 5% 0402
3E57	4822 117 11297	100kΩ 5% 0.1W
3E58	4822 117 13546	47Ω 5% 0402
3E59	4822 117 13606	10kΩ 5% 0.01W 0402
3E61	4822 117 13546	47Ω 5% 0402
3E62	4822 117 13548	1kΩ 5% 0402
3E63	4822 117 13606	10kΩ 5% 0.01W 0402
3E64	4822 117 13606	10kΩ 5% 0.01W 0402
3E69	3198 031 04720	4.7kΩ 5% 0402
3E70	3198 031 04720	4.7kΩ 5% 0402
3E73	4822 117 13606	10kΩ 5% 0.01W 0402
3E74	4822 117 13546	47Ω 5% 0402
3E77	4822 117 13546	47Ω 5% 0402
3E78	4822 117 13546	47Ω 5% 0402
3E79	4822 117 13546	47Ω 5% 0402
3E80	4822 117 13546	47Ω 5% 0402
3E81	4822 117 13546	47Ω 5% 0402
3E82	3198 031 01090	10Ω 5% 0.01W 0402
3E83	3198 031 01090	10Ω 5% 0.01W 0402
3E84	3198 031 01090	10Ω 5% 0.01W 0402
3E85	3198 031 01090	10Ω 5% 0.01W 0402
3E86	3198 031 01090	10Ω 5% 0.01W 0402
3E88	4822 117 13546	47Ω 5% 0402
3E89	4822 117 13546	47Ω 5% 0402
3E90	3198 031 06890	68Ω 5% 0402
3E91	3198 031 03390	33Ω 1% 0402
3I07	4822 117 13606	10kΩ 5% 0.01W 0402
3I08	4822 117 13597	330Ω 5% 0402 0.01W
3I28	4822 117 13545	100Ω 1% 0402
3I29	4822 051 30759	75Ω 5% 0.062W
3I30	4822 051 30759	75Ω 5% 0.062W
3I31	4822 051 30759	75Ω 5% 0.062W
3I32	4822 117 13548	1kΩ 5% 0402
3I33	4822 051 30101	100Ω 5% 0.062W
3I34	4822 117 13606	10kΩ 5% 0.01W 0402
3I35	4822 051 30101	100Ω 5% 0.062W
3I36	4822 117 13601	22kΩ 5% 0402
3I37	4822 117 13601	22kΩ 5% 0402
3I38	4822 117 13601	22kΩ 5% 0402
3I40	4822 051 30101	100Ω 5% 0.062W
3I41	4822 117 13548	1kΩ 5% 0402
3I42	4822 117 13548	1kΩ 5% 0402
3I42	4822 117 13602	2.2kΩ 5% 0.01W 0402
3I44	4822 117 13606	10kΩ 5% 0.01W 0402
3I45	3198 031 04730	47Ω 5% 0402
3I46	4822 117 13545	100Ω 1% 0402
3I47	4822 117 13602	2.2kΩ 5% 0.01W 0402
3I49	4822 117 13545	100Ω 1% 0402
3I50	4822 051 30271	270Ω 5% 0.062W
3I51	4822 051 30101	100Ω 5% 0.062W
3I51	4822 117 13545	100Ω 1% 0402
3I52	4822 051 30271	270Ω 5% 0.062W
3I53	4822 051 30101	100Ω 5% 0.062W
3I53	4822 117 13545	100Ω 1% 0402
3I54	4822 051 30101	100Ω 5% 0.062W
3I55	4822 051 30759	75Ω 5% 0.062W
3I56	4822 051 30101	100Ω 5% 0.062W
3I57	4822 051 30759	75Ω 5% 0.062W
3I58	4822 051 30101	100Ω 5% 0.062W
3I59	4822 051 30759	75Ω 5% 0.062W
3I60	4822 051 30759	75Ω 5% 0.062W
3I61	4822 051 30101	100Ω 5% 0.062W
3I61	4822 117 13545	100Ω 1% 0402
3I62	4822 051 30101	100Ω 5% 0.062W
3I62	4822 117 13545	100Ω 1% 0402
3I63	4822 051 30392	3.9Ω 5% 0.063W 0603
3I64	3198 031 08220	8.2kΩ 5% 0.5W
3I65	4822 051 30101	100Ω 5% 0.062W
3I66	4822 051 30759	75Ω 5% 0.062W
3I67	4822 051 30759	75Ω 5% 0.062W
3I68	4822 051 30101	100Ω 5% 0.062W
3I69	4822 051 30271	270Ω 5% 0.062W
3I70	4822 051 30101	100Ω 5% 0.062W
3I70	4822 117 13545	100Ω 1% 0402
3I71	4822 051 30271	270Ω 5% 0.062W
3I72	4822 051 30101	100Ω 5% 0.062W
3I72	4822 117 13545	100Ω 1% 0402
3I75	4822 051 30101	100Ω 5% 0.062W
3I76	4822 051 30101	100Ω 5% 0.062W
3I77	4822 051 30759	75Ω 5% 0.062W
3I78	4822 051 30759	75Ω 5% 0.062W
3I79	4822 051 30101	100Ω 5% 0.062W
3I79	4822 117 13545	100Ω 1% 0402
3I80	4822 051 30101	100Ω 5% 0.062W
3I80	4822 117 13545	100Ω 1% 0402
3I81	3198 031 08220	8.2kΩ 5% 0.5W
3I82	4822 051 30392	3.9Ω 5% 0.063W 0603
3I83	4822 051 30101	100Ω 5% 0.062W
3I84	4822 051 30759	75Ω 5% 0.062W
3I86	4822 051 30759	75Ω 5% 0.062W
3I87	4822 051 30101	100Ω 5% 0.062W
3I88	4822 051 30759	75Ω 5% 0.062W
3I89	4822 051 30271	270Ω 5% 0.062W
3I90	4822 051 30101	100Ω 5% 0.062W
3I90	4822 117 13545	100Ω 1% 0402
3I91	4822 051 30271	270Ω 5% 0.062W
3I92	4822 051 30101	100Ω 5% 0.062W
3I92	4822 117 13545	100Ω 1% 0402
3I98	4822 117 11297	100kΩ 5% 0.1W
3I98	4822 117 13605	Jumper 0402
3I99	4822 051 30271	270Ω 5% 0.062W
3IA0	4822 051 30101	100Ω 5% 0.062W
3IA0	4822 117 13545	100Ω 1% 0402
3IA1	4822 117 11297	100kΩ 5% 0.1W
3IA2	4822 051 30101	100Ω 5% 0.062W
3IA2	4822 117 13545	100Ω 1% 0402
3IA3	4822 117 13601	22kΩ 5% 0402
3IA4	4822 117 13548	1kΩ 5% 0402
3IA5	4822 117 13548	1kΩ 5% 0402
3IA6	4822 117 13548	1kΩ 5% 0402
3IA7	4822 117 13548	1kΩ 5% 0402
3IA8	4822 117 13548	1kΩ 5% 0402
3IB1	4822 117 13606	10kΩ 5% 0.01W 0402
3IB2	4822 117 13545	100Ω 1% 0402
3IB3	4822 117 13606	10kΩ 5% 0.01W 0402
3IB4	4822 117 13601	22kΩ 5% 0402
3IB5	4822 117 13601	22kΩ 5% 0402
3IC1⚠	4822 117 13574	1.5Ω 5% 1206
3IC2	4822 117 13601	22kΩ 5% 0402
3IC3	4822 117 13601	22kΩ 5% 0402
3IC4	4822 117 13545	100Ω 1% 0402
3IC6	4822 117 13545	100Ω 1% 0402
3IC8	3198 031 05610	560Ω 5% 0.01W 0402
3IC9	4822 117 13601	22kΩ 5% 0402
3ID0	3198 031 04720	4.7kΩ 5% 0402
3ID1	3198 031 01540	150kΩ 5% 0402
3ID5	3198 031 01090	10Ω 5% 0.01W 0402
3ID7	4822 117 11297	100kΩ 5% 0.1W
3ID8	4822 117 11297	100kΩ 5% 0.1W
3ID9	3198 031 05610	560Ω 5% 0.01W 0402
3IE2	4822 117 13545	100Ω 1% 0402
3IE3	4822 117 13545	100Ω 1% 0402
3IE7	3198 031 01090	10Ω 5% 0.01W 0402
3IE9	4822 117 13601	22kΩ 5% 0402
3IF0	4822 117 13545	100Ω 1% 0402
3IF5	4822 117 13601	22kΩ 5% 0402
3IF6	4822 051 30101	100Ω 5% 0.062W
3IF6	4822 117 13545	100Ω 1% 0402
3IF7	4822 051 30101	100Ω 5% 0.062W
3IF7	4822 117 13545	100Ω 1% 0402
3IG0	3198 031 05610	560Ω 5% 0.01W 0402

3IG0	4822 117 13548	1kΩ 5% 0402
3IG1	3198 031 01090	10Ω 5% 0.01W 0402
3IG3	3198 031 05610	560Ω 5% 0.01W 0402
3IG3	4822 117 13548	1kΩ 5% 0402
3IG4	3198 031 01090	10Ω 5% 0.01W 0402
3IG6	3198 031 05610	560Ω 5% 0.01W 0402
3IG6	4822 117 13548	1kΩ 5% 0402
3IG7	3198 031 01090	10Ω 5% 0.01W 0402
3IGB	3198 031 04720	4.7kΩ 5% 0402
3IGE	4822 117 13606	10kΩ 5% 0.01W 0402
3IGF	3198 031 04730	47Ω 5% 0402
3IH1	3198 031 04730	47Ω 5% 0402
3IH1	4822 117 11297	100kΩ 5% 0.1W
3IH2	3198 031 04730	47Ω 5% 0402
3IH7	3198 031 05610	560Ω 5% 0.01W 0402
3IH8	3198 031 04730	47Ω 5% 0402
3IH9	3198 031 04730	47Ω 5% 0402
3IHA	4822 117 13545	100Ω 1% 0402
3IHB	4822 117 13545	100Ω 1% 0402
3IHC	4822 117 13545	100Ω 1% 0402
3IHG	4822 117 12903	1.8kΩ 1% 0.063W 0603
3II0	4822 117 13606	10kΩ 5% 0.01W 0402
3II1	4822 117 13601	22kΩ 5% 0402
3II2	4822 117 13601	22kΩ 5% 0402
3II3	3198 031 04730	47Ω 5% 0402
3II4	3198 031 04730	47Ω 5% 0402
3II6	4822 117 13601	22kΩ 5% 0402
3II7	4822 117 13601	22kΩ 5% 0402
3II8	4822 117 13548	1kΩ 5% 0402
3II9	4822 117 13548	1kΩ 5% 0402
3IJ8	4822 117 13548	1kΩ 5% 0402
3IK0	4822 117 13548	1kΩ 5% 0402
3IK2	4822 117 13601	22kΩ 5% 0402
3IK3	4822 117 13601	22kΩ 5% 0402
3IK7⚠	4822 117 11152	4.7Ω 5%
3IN1	4822 117 13548	1kΩ 5% 0402
3IN4⚠	4822 117 11748	Fuse 2.2Ω 5% 1206
3IN5	4822 117 13601	22kΩ 5% 0402
3IN6	4822 117 13601	22kΩ 5% 0402
3IN8	3198 031 01090	10Ω 5% 0.01W 0402
3IO5	4822 117 13606	10kΩ 5% 0.01W 0402
3IO6	4822 117 13606	10kΩ 5% 0.01W 0402
3IP0	3198 031 08220	8.2kΩ 5% 0.5W
3IP1	4822 117 13602	2.2kΩ 5% 0.01W 0402
3IP2	4822 117 13596	220Ω 5% 0.01W 0402
3IP3	4822 051 30689	68Ω 5% 0.063W 0603
3IP3	4822 051 30759	75Ω 5% 0.062W
3IP4	3198 031 02710	270Ω 5% 0.1W 0402
3IP5⚠	4822 117 11748	Fuse 2.2Ω 5% 1206
3IP6	4822 117 13548	1kΩ 5% 0402
3IP7	3198 031 02720	2.7kΩ 5% 0.01W 0402
3IP8	4822 117 13548	1kΩ 5% 0402
3IQ0	3198 031 01090	10Ω 5% 0.01W 0402
3IQ5	3198 031 04730	47Ω 5% 0402
3IQ6	4822 117 13545	100Ω 1% 0402
3IQ7	4822 117 13545	100Ω 1% 0402
3IQ8	3198 031 03320	3.3kΩ 5% 0402
3IQ9	4822 117 13548	1kΩ 5% 0402
3IR1	3198 031 02710	270Ω 5% 0.1W 0402
3IR2	3198 031 04720	4.7kΩ 5% 0402
3IR3	3198 031 04720	4.7kΩ 5% 0402
3IR4	4822 117 13545	100Ω 1% 0402
3IR5	4822 117 13546	47Ω 5% 0402
3IR6	4822 117 13546	47Ω 5% 0402
3IR7	4822 117 13543	470Ω 5% 0402
3IR8	3198 031 03320	3.3kΩ 5% 0402
3IR9	2322 706 71201	120Ω 1% 0402
3IS0	2322 706 71201	120Ω 1% 0402
3IS1	2322 706 71201	120Ω 1% 0402
3IS2	4822 117 13545	100Ω 1% 0402
3IS5	2322 706 71201	120Ω 1% 0402
3IT0	3198 031 04730	47Ω 5% 0402
3IT1	3198 031 04730	47Ω 5% 0402
3IT4	3198 031 04730	47Ω 5% 0402
3IT5	2322 706 71201	120Ω 1% 0402
3IT6	2322 706 71201	120Ω 1% 0402
3IT7	4822 117 13548	1kΩ 5% 0402
3IT8	4822 117 13548	1kΩ 5% 0402
3IT9	4822 117 13597	330Ω 5% 0402 0.01W
3IU0⚠	4822 117 11748	Fuse 2.2Ω 5% 1206
3IV0	3198 031 08220	8.2kΩ 5% 0.5W
3IV1	4822 117 13548	1kΩ 5% 0402
3IV2	4822 117 13543	470Ω 5% 0402
3IV3	4822 117 13548	1kΩ 5% 0402
3IV4	4822 117 13548	1kΩ 5% 0402
3IV5	4822 117 13548	1kΩ 5% 0402
3IV6	4822 117 13548	1kΩ 5% 0402
3IW3	4822 117 13545	100Ω 1% 0402
3IW9	4822 117 13545	100Ω 1% 0402
3L03	4822 117 13545	100Ω 1% 0402
3L04	4822 117 13545	100Ω 1% 0402
3L05	4822 117 13545	100Ω 1% 0402
3L06	4822 117 13545	100Ω 1% 0402
3L08	3198 031 02720	2.7kΩ 5% 0.01W 0402
3L11	4822 117 13545	100Ω 1% 0402
3L12	4822 117 13543	470Ω 5% 0402
3L19	3198 031 06810	680Ω 5% 0.01W 0402
3L20	3198 031 06810	680Ω 5% 0.01W 0402
3L21	3198 031 06810	680Ω 5% 0.01W 0402
3L28	4822 117 13543	470Ω 5% 0402
3L29	3198 031 01510	150Ω 5% 0.01W 0402
3L30	3198 031 01510	150Ω 5% 0.01W 0402
3L31	3198 031 01510	150Ω 5% 0.01W 0402
3L32	4822 117 13543	470Ω 5% 0402
3L33	4822 117 13543	470Ω 5% 0402
3P65	4822 117 13545	100Ω 1% 0402
3P66	4822 117 13545	100Ω 1% 0402
3P67	3198 031 04720	4.7kΩ 5% 0402
3P69	3198 031 04720	4.7kΩ 5% 0402
3P70	3198 031 04720	4.7kΩ 5% 0402
3P72	3198 031 04720	4.7kΩ 5% 0402
3U01	4822 051 30102	1kΩ 5% 0.062W
3U02	4822 117 13548	1kΩ 5% 0402
3U03	4822 117 13603	33kΩ 5% 0402
3U04	4822 051 20121	120Ω 5% 0.1W
3U05	4822 051 30102	1kΩ 5% 0.062W
3U05	4822 117 13548	1kΩ 5% 0402
3U06	4822 117 13543	470Ω 5% 0402
3U07	3198 031 02290	22Ω 5% 0.1W 0402
3U08	2322 706 71502	1.5kΩ 1% 0402
3U09	3198 031 05620	5.6kΩ 5% 0.01W 0402
3U10	3198 031 01210	120Ω 5% 0.01W 0402
3U10	4822 117 13596	220Ω 5% 0.01W 0402
3U11	4822 051 30121	120Ω 5% 0.062W
3U12	4822 117 13601	22kΩ 5% 0402
3U13	4822 117 13606	10kΩ 5% 0.01W 0402
3U14	4822 051 30102	1kΩ 5% 0.062W
3U15	2322 706 73302	3.3kΩ 1% 0402
3U16	3198 031 01210	120Ω 5% 0.01W 0402
3U17	3198 031 04780	4.7Ω 5% 0402
3U18	2322 704 61002	1kΩ 1%
3U18	2322 706 71002	1kΩ 1% 0402
3U19	3198 031 04720	4.7kΩ 5% 0402
3U20	2322 704 61002	1kΩ 1%
3U20	2322 706 71002	1kΩ 1% 0402
3U21	3198 031 04730	47Ω 5% 0402
3U22	3198 031 02710	270Ω 5% 0.1W 0402
3U23	3198 031 01090	10Ω 5% 0.01W 0402
3U24	4822 117 13601	22kΩ 5% 0402
3U25	3198 031 02240	220kΩ 5% 0.1W 0402
3U26	4822 117 13601	22kΩ 5% 0402
3U27	4822 117 13601	22kΩ 5% 0402
3U28	3198 031 04730	47Ω 5% 0402
3U29	4822 051 30109	10Ω 5% 0.062W
3U30	4822 051 20121	120Ω 5% 0.1W
3U31	4822 051 20121	120Ω 5% 0.1W
3U32	3198 031 01830	18kΩ 5% 0.01W 0402
3U33	4822 117 13606	10kΩ 5% 0.01W 0402
3U34	3198 031 04740	470 kΩ 5% 0402
3U35	4822 117 13606	10kΩ 5% 0.01W 0402
3U36	4822 117 13602	2.2kΩ 5% 0.01W 0402
3U37	4822 117 13601	22kΩ 5% 0402
3U38	4822 117 13602	2.2kΩ 5% 0.01W 0402
3U39	4822 117 13601	22kΩ 5% 0402
3U40	3198 031 01540	150kΩ 5% 0402
3U41	4822 117 13548	1kΩ 5% 0402
3U42	4822 117 13606	10kΩ 5% 0.01W 0402
3U43	4822 117 13601	22kΩ 5% 0402
3U44	3198 031 01050	1MΩ 5% 0402
3U45	3198 031 01050	1MΩ 5% 0402
3U46	2322 706 74703	47kΩ 1% 0402
3U46	5322 117 13029	47kΩ 1% 0.063W 0603
3U51	4822 117 12139	22Ω 5% 0.062W
3U52	4822 051 30102	1kΩ 5% 0.062W
3U53	3198 031 01830	18kΩ 5% 0.01W 0402
3U54	4822 117 13545	100Ω 1% 0402
3U55	4822 051 30102	1kΩ 5% 0.062W
3U56	3198 031 04720	4.7kΩ 5% 0402
3U57	4822 117 13606	10kΩ 5% 0.01W 0402
3U60	4822 117 13548	1kΩ 5% 0402
3U61	4822 117 13606	10kΩ 5% 0.01W 0402
3U62	4822 117 13548	1kΩ 5% 0402
3U63	4822 117 13602	2.2kΩ 5% 0.01W 0402
3U64	4822 117 13548	1kΩ 5% 0402
3U65	4822 117 13548	1kΩ 5% 0402
3U66	4822 117 13606	10kΩ 5% 0.01W 0402
3U67	4822 117 13545	100Ω 1% 0402
3U68	4822 117 13606	10kΩ 5% 0.01W 0402
3U69	4822 117 13548	1kΩ 5% 0402
3U70	4822 051 30102	1kΩ 5% 0.062W
3V01	3198 031 01810	180Ω 5% 0402
3V02	3198 031 01810	180Ω 5% 0402
3V17	3198 031 01810	180Ω 5% 0402
3V18	3198 031 03910	390Ω 1% 0402
3V19	3198 031 01810	180Ω 5% 0402
3V20	3198 031 01810	180Ω 5% 0402
3V21	2350 033 11339	4 x 33Ω 5%
3V21	2350 033 11689	4x 68Ω 5% Netw.
3V22	2350 033 11339	4 x 33Ω 5%
3V22	2350 033 11689	4x 68Ω 5% Netw.
3V23	2350 033 11339	4 x 33Ω 5%
3V23	2350 033 11689	4x 68Ω 5% Netw.
3V24	2350 033 11339	4 x 33Ω 5%
3V24	2350 033 11689	4x 68Ω 5% Netw.
3V25	3198 031 01810	180Ω 5% 0402
3V26	3198 031 01810	180Ω 5% 0402
3V27	3198 031 01810	180Ω 5% 0402
3V28	3198 031 01810	180Ω 5% 0402
3V29	3198 031 01810	180Ω 5% 0402
3V30	3198 031 01810	180Ω 5% 0402
3V31	3198 031 01810	180Ω 5% 0402
3V32	3198 031 01810	180Ω 5% 0402
3V33	3198 031 01810	180Ω 5% 0402
3V34	3198 031 01810	180Ω 5% 0402
3V35	4822 117 13545	100Ω 1% 0402
3V36	4822 117 13545	100Ω 1% 0402
3V37	4822 117 13545	100Ω 1% 0402
3V38	4822 117 13545	100Ω 1% 0402
3V39	3198 031 04720	4.7kΩ 5% 0402
3V40	4822 117 13545	100Ω 1% 0402
3V50	4822 117 13606	10kΩ 5% 0.01W 0402
3V51	4822 117 13606	10kΩ 5% 0.01W 0402
3V52	4822 117 13606	10kΩ 5% 0.01W 0402
3V53	4822 117 13606	10kΩ 5% 0.01W 0402
3V54	4822 117 13606	10kΩ 5% 0.01W 0402
3V55	4822 117 13606	10kΩ 5% 0.01W 0402
3V56	4822 117 13545	100Ω 1% 0402
3Y01	4822 117 13545	100Ω 1% 0402
3Y03	4822 117 13545	100Ω 1% 0402
3Y04	4822 117 13602	2.2kΩ 5% 0.01W 0402
3Y05	4822 117 13545	100Ω 1% 0402
3Y07	4822 117 13545	100Ω 1% 0402
3Y08	3198 031 03320	3.3kΩ 5% 0402
3Y08	4822 117 13545	100Ω 1% 0402
3Y09	4822 117 13545	100Ω 1% 0402
3Y10	4822 117 13545	100Ω 1% 0402
3Y11	4822 117 13545	100Ω 1% 0402
3Y12	4822 117 13545	100Ω 1% 0402
3Y14	3198 031 04720	4.7kΩ 5% 0402
3Y14	4822 117 13548	1kΩ 5% 0402
3Y15	4822 117 13548	1kΩ 5% 0402
3Y16	4822 117 13548	1kΩ 5% 0402
3Y17	4822 117 13545	100Ω 1% 0402
3Y18	4822 117 13545	100Ω 1% 0402
3Y19	4822 117 13545	100Ω 1% 0402
3Y20	3198 031 06890	68Ω 5% 0402
3Y20	4822 117 12521	68Ω 1% 0.1W
3Y21	3198 031 06890	68Ω 5% 0402
3Y22	3198 031 06890	68Ω 5% 0402
3Y23	3198 031 06890	68Ω 5% 0402
3Y24	4822 117 11297	100kΩ 5% 0.1W
3Y25	4822 117 13545	100Ω 1% 0402
3Y27	4822 117 13545	100Ω 1% 0402
3Y28	4822 117 13545	100Ω 1% 0402
3Y29	3198 031 05620	5.6kΩ 5% 0.01W 0402
3Y30	3198 031 01530	15kΩ 5% 0.01W 0402
3Y30	3198 031 05620	5.6kΩ 5% 0.01W 0402
3Y34	4822 117 13545	100Ω 1% 0402
3Y35	4822 117 13545	100Ω 1% 0402
3Y36	4822 117 13545	100Ω 1% 0402
3Y37	3198 031 04720	4.7kΩ 5% 0402
3Y38	4822 117 13602	2.2kΩ 5% 0.01W 0402
3Y39	4822 117 13606	10kΩ 5% 0.01W 0402
3Y40	4822 117 13545	100Ω 1% 0402
3Z26	4822 117 13548	1kΩ 5% 0402
3Z36	3198 031 06820	6.8kΩ 5% 0.01W 0402
3Z50	4822 117 13545	100Ω 1% 0402
3Z51	4822 117 13545	100Ω 1% 0402
3Z52	4822 117 13545	100Ω 1% 0402
3Z54	3198 031 04720	4.7kΩ 5% 0402
9001	4822 117 13605	Jumper 0402
9002	4822 117 13605	Jumper 0402
9007	4822 117 13605	Jumper 0402
9010	4822 117 13605	Jumper 0402
9011⚠	4822 117 13605	Jumper 0402
9012	4822 117 13605	Jumper 0402
9013	4822 117 13605	Jumper 0402
9016	4822 051 30008	Jumper 0603
9020	4822 117 13605	Jumper 0402
9023	4822 117 13605	Jumper 0402
9024	4822 117 13605	Jumper 0402
9316	4822 117 13605	Jumper 0402
9322	4822 117 13605	Jumper 0402
9410	4822 117 13605	Jumper 0402
9413	4822 117 13605	Jumper 0402
9416	4822 117 13605	Jumper 0402
9417	4822 117 13605	Jumper 0402
9418	4822 117 13605	Jumper 0402
9419	4822 117 13605	Jumper 0402
9420	4822 117 13605	Jumper 0402
9423	4822 117 13605	Jumper 0402
9424	4822 117 13605	Jumper 0402

9425	4822 117 13605	Jumper 0402
9426	4822 117 13605	Jumper 0402
9427	4822 117 13545	100Ω 1% 0402
9428	4822 117 13605	Jumper 0402
9702	4822 117 13605	Jumper 0402
9704	4822 117 13605	Jumper 0402
9706	4822 117 13605	Jumper 0402
9707	4822 117 13605	Jumper 0402
9708	4822 117 13605	Jumper 0402
9709	4822 117 13605	Jumper 0402
9710	4822 117 13605	Jumper 0402
9713	4822 117 13605	Jumper 0402
9714	4822 117 13605	Jumper 0402
9715	4822 117 13605	Jumper 0402
9716	4822 117 13605	Jumper 0402
9717	4822 117 13605	Jumper 0402
9718	4822 117 13605	Jumper 0402
9720	4822 117 13605	Jumper 0402
9721	4822 117 13605	Jumper 0402
9722	4822 117 13605	Jumper 0402
9723	4822 117 13605	Jumper 0402
9724	4822 117 13605	Jumper 0402
9727	4822 117 13605	Jumper 0402
9728	4822 117 13605	Jumper 0402
9730	4822 117 13605	Jumper 0402
9732	4822 117 13605	Jumper 0402
9750	4822 117 13605	Jumper 0402
9751	4822 117 13605	Jumper 0402
9752	4822 117 13605	Jumper 0402
9753	4822 117 13605	Jumper 0402
9754	4822 117 13605	Jumper 0402
9755	4822 117 13605	Jumper 0402
9756	4822 117 13605	Jumper 0402
9757	4822 117 13605	Jumper 0402
9758	4822 117 13605	Jumper 0402
9760	4822 117 13605	Jumper 0402
9761	4822 117 13605	Jumper 0402
9762	4822 117 13605	Jumper 0402
9763	4822 117 13605	Jumper 0402
9765	4822 117 13605	Jumper 0402
9766	4822 117 13605	Jumper 0402
9772	4822 117 13605	Jumper 0402
9773	4822 117 13605	Jumper 0402
9774	4822 117 13605	Jumper 0402
9775	4822 117 13605	Jumper 0402
9800	4822 117 13605	Jumper 0402
9801	4822 117 13605	Jumper 0402
9802	4822 117 13605	Jumper 0402
9803	4822 117 13605	Jumper 0402
9804	4822 117 13605	Jumper 0402
9805	4822 117 13605	Jumper 0402
9806	4822 117 13605	Jumper 0402
9808	4822 117 13605	Jumper 0402
9809	4822 117 13605	Jumper 0402
9811	4822 117 13605	Jumper 0402
9812	4822 117 13605	Jumper 0402
9813	2350 033 11689	4x 68Ω 5% Netw.
9814	2350 033 11689	4x 68Ω 5% Netw.
9815	2350 033 11229	4x 22Ω 5% Netw.
9815	4822 117 13605	Jumper 0402
9816	2350 033 11229	4x 22Ω 5% Netw.
9816	4822 117 13605	Jumper 0402
9817	2350 033 11229	4x 22Ω 5% Netw.
9817	4822 117 13605	Jumper 0402
9818	4822 117 13605	Jumper 0402
9819	2350 033 11229	4x 22Ω 5% Netw.
9820	2350 033 11229	4x 22Ω 5% Netw.
9820	4822 117 13605	Jumper 0402
9821	3198 031 06890	68Ω 5% 0402
9821	4822 117 13605	Jumper 0402
9822	3198 031 06890	68Ω 5% 0402
9822	4822 117 13605	Jumper 0402
9823	3198 031 06890	68Ω 5% 0402
9824	3198 031 06890	68Ω 5% 0402
9825	3198 031 06890	68Ω 5% 0402
9825	4822 117 13605	Jumper 0402
9826	3198 031 06890	68Ω 5% 0402
9826	4822 117 13605	Jumper 0402
9827	3198 031 06890	68Ω 5% 0402
9827	4822 117 13605	Jumper 0402
9A00	4822 117 13605	Jumper 0402
9A01	4822 117 13605	Jumper 0402
9A04	4822 117 13605	Jumper 0402
9A05	4822 117 13605	Jumper 0402
9A06	4822 117 13605	Jumper 0402
9A07	4822 117 13605	Jumper 0402
9A24	4822 117 13605	Jumper 0402
9A65	4822 117 13605	Jumper 0402
9A67	4822 051 20008	Jumper 0805
9A71	4822 051 20008	Jumper 0805
9A75	4822 117 13605	Jumper 0402
9C02	4822 117 13605	Jumper 0402
9E60	4822 117 13605	Jumper 0402
9E62	4822 117 13605	Jumper 0402

9E65	4822 117 13605	Jumper 0402
9E66	4822 117 13605	Jumper 0402
9E67	4822 117 13605	Jumper 0402
9E68	4822 117 13605	Jumper 0402
9E69	4822 117 13605	Jumper 0402
9E70	4822 117 13605	Jumper 0402
9E71	4822 117 13605	Jumper 0402
9E72	4822 117 13605	Jumper 0402
9E73	4822 117 13605	Jumper 0402
9E74	4822 117 13605	Jumper 0402
9E76	4822 117 13605	Jumper 0402
9E77	4822 117 13605	Jumper 0402
9I00	4822 117 13605	Jumper 0402
9I02	4822 117 13605	Jumper 0402
9I07	4822 117 13605	Jumper 0402
9I15	4822 117 13605	Jumper 0402
9I24	4822 117 13605	Jumper 0402
9I28	4822 117 13605	Jumper 0402
9I30	4822 117 13605	Jumper 0402
9I31	4822 117 13605	Jumper 0402
9I32	4822 117 13605	Jumper 0402
9I33	4822 117 13605	Jumper 0402
9I34	4822 117 13605	Jumper 0402
9I35	4822 117 13605	Jumper 0402
9I39	4822 117 13605	Jumper 0402
9I45	4822 117 13605	Jumper 0402
9I49	4822 117 13605	Jumper 0402
9I68	4822 117 13605	Jumper 0402
9I77	4822 117 13605	Jumper 0402
9I85	4822 117 13605	Jumper 0402
9IA5	4822 117 13605	Jumper 0402
9ID0	4822 117 13605	Jumper 0402
9ID1	4822 117 13605	Jumper 0402
9ID3	4822 117 13605	Jumper 0402
9ID5	4822 117 13605	Jumper 0402
9ID8	4822 117 13605	Jumper 0402
9ID9	4822 117 13605	Jumper 0402
9P69	4822 117 13605	Jumper 0402
9P70	4822 117 13605	Jumper 0402
9P71	4822 117 13605	Jumper 0402
9T01	4822 117 13601	22kΩ 5% 0402
9T04	4822 117 13605	Jumper 0402
9T07	4822 117 13605	Jumper 0402
9T08	4822 117 13605	Jumper 0402
9T12	4822 117 13605	Jumper 0402
9T14	4822 117 13605	Jumper 0402
9T50	4822 117 13605	Jumper 0402
9Y00	4822 117 13605	Jumper 0402
9Y03	4822 117 13605	Jumper 0402
9Y04	4822 117 13605	Jumper 0402
9Y05	4822 117 13605	Jumper 0402
9Y06	4822 117 13605	Jumper 0402
9Y07	4822 117 13605	Jumper 0402
9Y08	4822 117 13605	Jumper 0402
9Y09	4822 117 13605	Jumper 0402
9Y13	4822 117 13605	Jumper 0402
9Y15	4822 117 13605	Jumper 0402
9Y16	4822 117 13605	Jumper 0402
9Y99	4822 320 12423	Speaker cable

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5003	4822 157 11716	Bead 30Ω at 100MHz
5401	3198 018 56880	6.8μH 10% 0603
5403	2422 549 00195	Bead 40MHz4 R
5403	2422 549 44461	Trimmer 40MHz 5CCE
5404	4822 157 11506	Bead 120Ω100MHz
5405	4822 157 11506	Bead 120Ω100MHz
5406	3198 018 52280	2.2μF 10% 1008
5408	2422 549 44983	Trimmer 78MHz 5CCB
5411	4822 157 11892	0.22μH 10% 0805
5415	4822 157 11716	Bead 30Ω at 100MHz
5416	4822 157 11716	Bead 30Ω at 100MHz
5703	4822 157 11716	Bead 30Ω at 100MHz
5705	4822 157 11876	6.8μH 10% 0805
5713	4822 157 11716	Bead 30Ω at 100MHz
5714	4822 157 11716	Bead 30Ω at 100MHz
5719	4822 157 11716	Bead 30Ω at 100MHz
5720	4822 157 11716	Bead 30Ω at 100MHz
5722	4822 157 11716	Bead 30Ω at 100MHz
5723	4822 157 11716	Bead 30Ω at 100MHz
5726	4822 157 11716	Bead 30Ω at 100MHz
5728	4822 157 11716	Bead 30Ω at 100MHz
5750	4822 157 11716	Bead 30Ω at 100MHz
5751	4822 157 11716	Bead 30Ω at 100MHz
5752	4822 157 11716	Bead 30Ω at 100MHz
5753	4822 157 11716	Bead 30Ω at 100MHz
5755	4822 157 11716	Bead 30Ω at 100MHz
5756	4822 157 11716	Bead 30Ω at 100MHz
5757	4822 157 11716	Bead 30Ω at 100MHz
5758	4822 157 11716	Bead 30Ω at 100MHz
5759	4822 157 11716	Bead 30Ω at 100MHz
5760	4822 157 11716	Bead 30Ω at 100MHz

5761	4822 157 11716	Bead 30Ω at 100MHz
5762	4822 157 11716	Bead 30Ω at 100MHz
5763	4822 157 11716	Bead 30Ω at 100MHz
5764	4822 157 11716	Bead 30Ω at 100MHz
5767	4822 157 11716	Bead 30Ω at 100MHz
5768	4822 157 11716	Bead 30Ω at 100MHz
5769	4822 157 11716	Bead 30Ω at 100MHz
5770	4822 157 11716	Bead 30Ω at 100MHz
5771	4822 157 11716	Bead 30Ω at 100MHz
5772	4822 157 11716	Bead 30Ω at 100MHz
5775	4822 157 11716	Bead 30Ω at 100MHz
5777	4822 157 11716	Bead 30Ω at 100MHz
5778	4822 157 11876	6.8μH 10% 0805
5779	4822 157 11716	Bead 30Ω at 100MHz
5800	4822 157 11716	Bead 30Ω at 100MHz
5801	4822 157 11716	Bead 30Ω at 100MHz
5A00	4822 157 11716	Bead 30Ω at 100MHz
5A01	4822 157 11716	Bead 30Ω at 100MHz
5A02	4822 157 11716	Bead 30Ω at 100MHz
5A03	4822 157 11716	Bead 30Ω at 100MHz
5A06	4822 157 11716	Bead 30Ω at 100MHz
5A07	4822 157 11716	Bead 30Ω at 100MHz
5A19	4822 157 11828	22μH 20% 0805
5A38	4822 157 11716	Bead 30Ω at 100MHz
5E00	4822 156 21729	Bead 1kΩ 100MHz 0805
5E01	2422 549 42896	Bead 120Ω 100MHz
5E01	4822 156 21729	Bead 1kΩ 100MHz 0805
5E02	4822 156 21729	Bead 1kΩ 100MHz 0805
5E03	4822 156 21729	Bead 1kΩ 100MHz 0805
5E50	2422 549 43062	Bead 600Ω at 100MHz
5E50	4822 157 11499	Bead 60Ω 100MHz
5E51	2422 549 42896	Bead 120Ω 100MHz
5E51	2422 549 43062	Bead 600Ω at 100MHz
5E52	2422 549 43062	Bead 600Ω at 100MHz
5E53	2422 535 94134	10μH 20% 0805
5E53	2422 536 00779	10μH 20%
5E54	2422 549 43062	Bead 600Ω at 100MHz
5E54	4822 157 11499	Bead 60Ω 100MHz
5E55	2422 549 43062	Bead 600Ω at 100MHz
5E58	2422 549 43062	Bead 600Ω at 100MHz
5I02	3198 018 90050	Bead 1kΩ at 100MHz
5I05	4822 157 11716	Bead 30Ω at 100MHz
5I06	4822 157 11716	Bead 30Ω at 100MHz
5I12	4822 157 11716	Bead 30Ω at 100MHz
5I13	4822 157 11716	Bead 30Ω at 100MHz
5I21	4822 157 11716	Bead 30Ω at 100MHz
5I22	4822 157 11716	Bead 30Ω at 100MHz
5I30	4822 157 11716	Bead 30Ω at 100MHz
5I31	4822 157 11716	Bead 30Ω at 100MHz
5I32	4822 157 11716	Bead 30Ω at 100MHz
5I33	4822 157 11716	Bead 30Ω at 100MHz
5I34	4822 157 11716	Bead 30Ω at 100MHz
5I35	4822 157 11716	Bead 30Ω at 100MHz
5I36	3198 018 34770	0.47μH 10% 0805
5I36	4822 157 11892	0.22μH 10% 0805
5I37	3198 018 34770	0.47μH 10% 0805
5I37	4822 157 11892	0.22μH 10% 0805
5I38	3198 018 34770	0.47μH 10% 0805
5I38	4822 157 11892	0.22μH 10% 0805
5I39	4822 157 11716	Bead 30Ω at 100MHz
5I40	4822 157 11716	Bead 30Ω at 100MHz
5I41	4822 157 11716	Bead 30Ω at 100MHz
5I42	4822 156 21729	Bead 1kΩ 100MHz 0805
5I45	4822 157 11716	Bead 30Ω at 100MHz
5I46	4822 157 11716	Bead 30Ω at 100MHz
5I47	4822 157 11716	Bead 30Ω at 100MHz
5L02	3198 018 54770	0.47μF 10% 0603
5L04	3198 018 54770	0.47μF 10% 0603
5L06	3198 018 54770	0.47μF 10% 0603
5L13	4822 156 21729	Bead 1kΩ 100MHz 0805
5L14	4822 156 21729	Bead 1kΩ 100MHz 0805
5L15	4822 156 21729	Bead 1kΩ 100MHz 0805
5L16	4822 157 11716	Bead 30Ω at 100MHz
5L17	4822 157 11716	Bead 30Ω at 100MHz
5L18	4822 157 11716	Bead 30Ω at 100MHz
5P51	4822 157 11716	Bead 30Ω at 100MHz
5T20	4822 157 71206	Bead 600Ω 100MHz
5T22	4822 157 71206	Bead 600Ω 100MHz
5T25	2422 535 94134	10μH 20% 0805
5U01	3104 308 20661	Transformer BD13118-02
5U02	2422 535 94134	10μH 20% 0805
5U02	2422 536 00779	10μH 20%
5U03	2422 549 44197	Bead 220Ω at 100MHz
5U03	4822 157 11716	Bead 30Ω at 100MHz
5U04	2422 549 44197	Bead 220Ω at 100MHz
5U04	4822 157 11716	Bead 30Ω at 100MHz
5U05	2422 535 94134	10μH 20% 0805
5U05	2422 536 00779	10μH 20%
5U06	2422 535 94134	10μH 20% 0805
5U06	2422 536 00779	10μH 20%
5Y00	4822 157 11716	Bead 30Ω at 100MHz
5Y01	4822 157 11716	Bead 30Ω at 100MHz
5Y02	2422 549 44197	Bead 220Ω at 100MHz
5Y03	2422 549 44197	Bead 220Ω at 100MHz

5Y06	4822 157 11716	Bead 30Ω at 100MHz
5Y07	4822 157 11716	Bead 30Ω at 100MHz
5Y09	4822 157 11716	Bead 30Ω at 100MHz
5Y10	4822 157 11716	Bead 30Ω at 100MHz
5Y11	4822 157 11716	Bead 30Ω at 100MHz
5Y12	4822 157 11716	Bead 30Ω at 100MHz
5Y13	4822 157 11716	Bead 30Ω at 100MHz
5Y14	4822 157 11716	Bead 30Ω at 100MHz
5Y15	4822 157 11716	Bead 30Ω at 100MHz
5Y16	4822 157 11716	Bead 30Ω at 100MHz
5Y17	4822 157 11716	Bead 30Ω at 100MHz
5Y18	4822 157 11716	Bead 30Ω at 100MHz
5Y19	4822 157 11716	Bead 30Ω at 100MHz
5Y20	4822 157 11716	Bead 30Ω at 100MHz
5Y21	4822 117 10353	150Ω 1% 0.1W
5Y21	4822 157 11716	Bead 30Ω at 100MHz
5Y22	4822 117 10353	150Ω 1% 0.1W
5Y22	4822 157 11716	Bead 30Ω at 100MHz
5Y23	4822 157 11716	Bead 30Ω at 100MHz
5Z01	2422 549 45325	Bead 67Ω at 100MHz
5Z02	2422 549 45325	Bead 67Ω at 100MHz
5Z03	2422 549 45325	Bead 67Ω at 100MHz
5Z04	2422 549 45325	Bead 67Ω at 100MHz
5Z05	2422 549 45325	Bead 67Ω at 100MHz

6001	4822 130 80622	BAT54
6002	4822 130 11397	BAS316
6003	4822 130 80622	BAT54
6004	4822 130 80622	BAT54
6005	4822 130 11422	PLVA2650A
6006	4822 130 11564	UDZ3.9B
6403	9340 552 30115	BA591
6701	4822 130 11397	BAS316
6702	4822 130 11397	BAS316
6703	4822 130 11397	BAS316
6705	4822 130 11397	BAS316
6710	4822 130 11397	BAS316
6711	4822 130 11397	BAS316
6712	4822 130 11397	BAS316
6713	4822 130 11397	BAS316
6714	4822 130 11397	BAS316
6715	4822 130 11397	BAS316
6717	4822 130 11397	BAS316
6718	4822 130 11397	BAS316
6719	9322 128 69685	S1D
6720	4822 130 11397	BAS316
6721	4822 130 11397	BAS316
6722	4822 130 11397	BAS316
6723	4822 130 11397	BAS316
6A00	4822 130 11551	UDZS10B
6A01	4822 130 11397	BAS316
6A02	4822 130 10838	UDZ3.3B
6A02	9322 159 70685	MM3Z9V1
6E51	4822 130 11397	BAS316
6E52	4822 130 11397	BAS316
6E53	4822 130 11397	BAS316
6E54	4822 130 11397	BAS316
6E55	4822 130 11397	BAS316
6E56	4822 130 11397	BAS316
6I01	4822 130 10328	BAV99W
6I03	4822 130 10328	BAV99W
6I04	4822 130 10328	BAV99W
6I06	4822 130 10328	BAV99W
6I07	4822 130 10328	BAV99W
6I08	4822 130 11423	PLVA2656A
6I09	4822 130 11423	PLVA2656A
6I10	4822 130 11397	BAS316
6I11	4822 130 11397	BAS316
6I12	4822 130 11397	BAS316
6I13	4822 130 11397	BAS316
6I14	4822 130 10328	BAV99W
6I15	4822 130 10328	BAV99W
6I16	4822 130 10328	BAV99W
6I17	4822 130 10328	BAV99W
6I18	4822 130 10328	BAV99W
6I19	4822 130 10328	BAV99W
6I20	4822 130 10328	BAV99W
6I21	4822 130 10328	BAV99W
6I22	4822 130 11416	PDZ6.8B
6I23	4822 130 11416	PDZ6.8B
6I24	4822 130 11416	PDZ6.8B
6I25	4822 130 11416	PDZ6.8B
6I26	4822 130 11416	PDZ6.8B
6I27	4822 130 11416	PDZ6.8B
6I28	4822 130 11416	PDZ6.8B
6I29	4822 130 11416	PDZ6.8B
6I30	4822 130 11416	PDZ6.8B
6I31	4822 130 11416	PDZ6.8B
6I32	4822 130 11416	PDZ6.8B
6I33	4822 130 11416	PDZ6.8B
6I35	4822 130 11416	PDZ6.8B
6I36	4822 130 11416	PDZ6.8B
6I37	4822 130 11416	PDZ6.8B
6I38	4822 130 11416	PDZ6.8B
6I39	4822 130 11416	PDZ6.8B
6I40	4822 130 11416	PDZ6.8B
6I41	4822 130 11416	PDZ6.8B
6I42	4822 130 11416	PDZ6.8B
6I43	4822 130 11416	PDZ6.8B
6I44	4822 130 11416	PDZ6.8B
6I45	4822 130 11416	PDZ6.8B
6I46	4822 130 11416	PDZ6.8B
6I47	4822 130 11416	PDZ6.8B
6I48	4822 130 11416	PDZ6.8B
6I49	9340 548 61115	PDZ12B
6I50	4822 130 11416	PDZ6.8B
6I51	4822 130 11416	PDZ6.8B
6I52	4822 130 11416	PDZ6.8B
6I53	4822 130 11416	PDZ6.8B
6I54	4822 130 11416	PDZ6.8B
6I55	4822 130 11416	PDZ6.8B
6I56	4822 130 11416	PDZ6.8B
6I61	4822 130 11416	PDZ6.8B
6I63	4822 130 11397	BAS316
6I64	4822 130 11397	BAS316
6I65	4822 130 11397	BAS316
6I66	4822 130 11397	BAS316
6I68	4822 130 11416	PDZ6.8B
6I69	4822 130 11416	PDZ6.8B
6I70	4822 130 11416	PDZ6.8B
6I75	4822 130 11416	PDZ6.8B
6I77	4822 130 11416	PDZ6.8B
6I90	4822 130 11416	PDZ6.8B
6I91	4822 130 11416	PDZ6.8B
6I92	4822 130 11416	PDZ6.8B
6I93	4822 130 11416	PDZ6.8B
6I99	4822 130 11423	PLVA2656A
6IA0	9340 548 61115	PDZ12B
6IA7	4822 130 11397	BAS316
6T01	4822 130 11397	BAS316
6T03	4822 130 11397	BAS316
6T08	9340 548 71115	PDZ33B
6U01	4822 130 11397	BAS316
6U03	4822 130 11397	BAS316
6U04	4822 130 11397	BAS316
6U05	9340 548 61115	PDZ12B
6U06	9322 203 37685	BZG05C3V9
6U07	4822 130 11416	PDZ6.8B
6U08	4822 130 80622	BAT54
6U09	4822 130 80622	BAT54
6U10	4822 130 11522	UDZ15B
6U11	4822 130 11397	BAS316
6U12	9340 548 52115	PDZ5.1B
6U13	9340 548 58115	PDZ9.1B
6U14	4822 130 10328	BAV99W
6U14	4822 130 11397	BAS316
6U15	4822 130 11397	BAS316
6U16	9340 548 52115	PDZ5.1B
6U17	4822 130 11416	PDZ6.8B
6V05	9322 085 77685	TLMG3100

7001	9352 684 81557	SAA5801H/015
7002	3198 010 42320	BC857BW
7003	3198 010 42310	BC847BW
7004	3198 010 42310	BC847BW
7005	9322 172 45668	LF33ABDT
7006		For SW see item 0601
7007	9322 157 20668	MSM51V18165F-60J
7008	3198 010 42310	BC847BW
7009	3198 010 42310	BC847BW
7010	3198 010 42320	BC857BW
7011	9322 130 41668	M24C64-WMN6
7012	9322 199 93668	M29W400DT-55N6
7013	3198 010 42310	BC847BW
7014	3198 010 42320	BC857BW
7017	9340 310 30215	PDTC144ET
7018	9352 115 40118	74LVC245APW
7019	9352 115 40118	74LVC245APW
7022	3198 010 42320	BC857BW
7022	9340 310 30215	PDTC144ET
7320	3198 010 42310	BC847BW
7322	3198 010 42310	BC847BW
7323	9352 625 24518	TDA9321H/N2
7402	3198 010 42310	BC847BW
7403	3198 010 42310	BC847BW
7407	3198 010 42320	BC857BW
7410	3198 010 42310	BC847BW
7411	3198 010 42310	BC847BW
7414	3198 010 42310	BC847BW
7415	3198 010 42310	BC847BW
7701	9322 170 14668	LF15ABDT
7703	3198 010 42310	BC847BW
7705	3198 010 42310	BC847BW
7706	3198 010 70400	74LVC1G14GW
7707	3198 010 42310	BC847BW
7708	3198 010 42310	BC847BW
7709	3198 010 42310	BC847BW
7710	3198 010 42310	BC847BW
7711	2422 486 80938	Socket 32p f
7011		For SW see item 0605
7712	9351 870 00118	74HC573PW
7713	9352 688 09557	SAA4978H/V204
7714	9965 000 02179	MS81V04160-25TB
7715	4822 209 73852	PMBT2369
7717	4822 209 73852	PMBT2369
7719	9322 206 19672	MSM56V16160F-7T3-FG
7720	9322 207 36702	T6TX5EF-0001
7725	4822 209 73852	PMBT2369
7752	9322 202 21671	T6TU5XB-0001
7753	9322 206 19672	MSM56V16160F-7T3-FG
7760	9352 730 86557	SAA4998H/V1
7772	9322 170 14668	LF15ABDT
7773	9322 179 78668	LF18ABDT
7774	9322 142 88668	LF25CDT
7A00	4822 209 30095	LM833D
7A01	3198 010 42310	BC847BW
7A02	9322 196 03702	MSP3411G-QI-B8V3
7A03	4822 209 30095	LM833D
7A04	4822 130 60373	BC856B
7A07	9322 183 05668	TS482ID
7A08	9340 425 20115	BC847BS
7A09	4822 130 60373	BC856B
7A10	9340 425 20115	BC847BS
7A11	9322 199 16668	M74HC590T
7A12	9322 199 16668	M74HC590T
7A13	3198 010 42310	BC847BW
7A14	9351 869 90118	74HCT573PW
7A15	9351 869 90118	74HCT573PW
7A16	9322 153 66668	CY7C199-15ZC
7A16	9322 208 98668	M68AF031AM70N6
7A31	9340 425 20115	BC847BS
7E01	9322 142 88668	LF25CDT
7E02		For SW see item 0602
7E03	9352 687 21165	74LVC1G126GW
7E04	9352 687 20125	74LVC1G125GW
7E05	9322 170 14668	LF15ABDT
7E10	9352 686 35118	PCA9515DP
7E12	9340 425 20115	BC847BS
7E23	9322 181 72671	AD9883AKST-110
7E24	9322 205 36668	AD9283BRSZ-50
7E25	3198 010 42320	BC857BW
7E26	3198 010 42320	BC857BW
7E27	3198 010 42320	BC857BW
7I01	9340 425 20115	BC847BS
7I02	9340 425 20115	BC847BS
7I03	9340 425 20115	BC847BS
7I04	3198 010 42310	BC847BW
7I05	9340 425 30115	BC847BPN
7I07	4822 130 60142	BC869
7I08	9352 697 76118	LM75ADP
7I09	3198 010 42310	BC847BW
7I10	9352 686 35118	PCA9515DP
7I12	9351 869 40118	74HC4053PW
7I18	9322 183 61682	SII907BCQ52
7I19		For SW see item 0603
7I20	9351 869 40118	74HC4053PW
7I21	9340 425 30115	BC847BPN
7I22	3198 010 42310	BC847BW
7I23	9340 425 20115	BC847BS
7I27	3198 010 42320	BC857BW
7I29	3198 010 42320	BC857BW
7I31	3198 010 42320	BC857BW
7I32	9351 869 40118	74HC4053PW
7I35	3198 010 42310	BC847BW
7I36	3198 010 42310	BC847BW
7I37	3198 010 42320	BC857BW
7I38	3198 010 42310	BC847BW
7I40	3198 010 42310	BC847BW
7I44	9340 425 20115	BC847BS
7I49	9340 310 30215	PDTC144ET
7I50	9340 425 30115	BC847BPN
7I51	9340 560 35235	BSH112
7I52	9340 560 35235	BSH112
7I53	9340 425 30115	BC847BPN
7I55	4822 209 12776	TDA8601T/C1
7I55	4822 209 16095	BA7657F
7I56	3198 010 42310	BC847BW
7I57	3198 010 42310	BC847BW
7I58	3198 010 42310	BC847BW
7I62	3198 010 42310	BC847BW
7I64	3198 010 42310	BC847BW
7L01	9322 181 72671	AD9883AKST-110
7L02	4822 209 17398	LD1117DT33
7P56	4822 209 17345	M62320FP
7U01	4822 130 60373	BC856B
7U02	4822 130 60373	BC856B

7U03	9322 091 04668	SI4410DY
7U04	9322 091 04668	SI4410DY
7U05	3198 010 42320	BC857BW
7U06	9340 425 20115	BC847BS
7U07	9340 425 30115	BC847BPN
7U08	4822 130 42804	BC817-25
7U09	4822 130 42804	BC817-25
7U10	3198 010 42310	BC847BW
7U11	3198 010 42310	BC847BW
7U12	3198 010 42310	BC847BW
7U13	9340 425 30115	BC847BPN
7V01	9322 200 14671	EP1C12F256C8
7V03	9322 206 19672	MSM56V16160F-7T3-FG
7V04	9340 425 20115	BC847BS
7Y01	9340 310 30215	PDTC144ET
7Y02	3198 010 42320	BC857BW

PDP Audio panel [C]

Various

1735	2422 025 10768	Connector 3p m
1736	2422 025 10768	Connector 3p m
1739	2422 025 10769	Connector 9p m
1M02	2422 025 11244	Connector 7p m

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2702	5322 126 11578	1nF 10% 50V 0603
2704	5322 126 11578	1nF 10% 50V 0603
2705	2020 552 96684	470nF 10% 25V 0805
2706	2222 580 15649	100nF 10% 50V 0805
2707	4822 126 14585	100nF 10% 0805 50V
2708	2020 552 96326	220nF 10% 16V
2709	4822 126 13881	470pF 5% 50V
2710	4822 126 13881	470pF 5% 50V
2711	5322 126 11578	1nF 10% 50V 0603
2712	2020 552 96684	470nF 10% 25V 0805
2713	2020 552 96684	470nF 10% 25V 0805
2714	4822 126 14549	33nF 16V 0603
2715	5322 126 11578	1nF 10% 50V 0603
2716	4822 126 14241	330pF 0603 50V
2717	5322 121 42498	680nF 5% 63V
2718	4822 122 33761	22pF 5% 50V
2719	5322 126 11578	1nF 10% 50V 0603
2720	2020 552 96326	220nF 10% 16V
2721	4822 126 13881	470pF 5% 50V
2722	4822 126 13881	470pF 5% 50V
2724	2020 552 96684	470nF 10% 25V 0805
2726	4822 126 14549	33nF 16V 0603
2727	5322 126 11578	1nF 10% 50V 0603
2728	4822 126 14241	330pF 0603 50V
2729	5322 121 42498	680nF 5% 63V
2730	2020 552 96684	470nF 10% 25V 0805
2764	4822 126 14491	2.2µF 10V 0805
2766	4822 126 14491	2.2µF 10V 0805
2768	4822 124 40255	100µF 20% 63V
2769	4822 124 40255	100µF 20% 63V
2777	2020 552 96683	220nF 10% 50V
2778	4822 124 40769	4.7µF 20% 100V
2779	2020 552 96683	220nF 10% 50V
2780	2020 552 96683	220nF 10% 50V
2781	2020 552 96683	220nF 10% 50V
2783	4822 124 81151	22µF 50V
2786	2238 586 15641	22nF 10% 50V 0603
2788	4822 124 40255	100µF 20% 63V
2789	2020 552 96684	470nF 10% 25V 0805
2790	4822 124 40255	100µF 20% 63V

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3701	4822 051 30103	10kΩ 5% 0.062W
3702	4822 051 30682	6.8Ω 5% 0.062W
3703	4822 051 30333	33kΩ 5% 0.062W
3704	4822 117 10833	10kΩ 1% 0.1W
3705	4822 051 20828	8.2Ω 5% 0.1W
3706	4822 051 30472	4.7Ω 5% 0.062W
3707	4822 051 30683	68kΩ 5% 0.062W
3708	4822 051 30563	56kΩ 5% 0.062W
3709	4822 117 11503	220Ω 1% 0.1W
3710	4822 051 30223	22kΩ 5% 0.062W
3711	4822 050 21204	120kΩ 1% 0,6W
3712	4822 051 30103	10kΩ 5% 0.062W
3713	4822 116 52207	1.2kΩ 5% 0.5W
3714	4822 117 12925	47kΩ 1% 0.063W 0603
3715	4822 117 12925	47kΩ 1% 0.063W 0603
3716	4822 117 12925	47kΩ 1% 0.063W 0603
3717	4822 116 52234	100kΩ 5% 0.5W
3718	4822 117 13632	100kΩ 1% 0603 0.62W
3721	4822 051 30472	4.7Ω 5% 0.062W
3722	4822 051 30683	68kΩ 5% 0.062W
3723	4822 051 30563	56kΩ 5% 0.062W
3724	4822 117 11503	220Ω 1% 0.1W
3725	4822 051 30223	22kΩ 5% 0.062W
3726	4822 117 11503	220Ω 1% 0.1W
3727	4822 117 11503	220Ω 1% 0.1W
3743	4822 117 11449	2.2kΩ 5% 0.1W 0805
3746	4822 051 30223	22kΩ 5% 0.062W
3747	4822 117 12925	47kΩ 1% 0.063W 0603
3748	4822 116 83883	470Ω 5% 0.5W
3750	4822 117 11449	2.2kΩ 5% 0.1W 0805
3756	4822 117 11449	2.2kΩ 5% 0.1W 0805
3757	4822 117 11449	2.2kΩ 5% 0.1W 0805
3760	4822 117 12891	220kΩ 1%
3761	4822 051 20109	10Ω 5% 0.1W
3762	4822 051 20109	10Ω 5% 0.1W
3763	4822 117 13632	100kΩ 1% 0603 0.62W
3764	4822 051 30222	2.2kΩ 5% 0.062W
3765	4822 051 30222	2.2kΩ 5% 0.062W
3766	4822 117 13632	100kΩ 1% 0603 0.62W
3767	4822 117 13632	100kΩ 1% 0603 0.62W
3768	4822 117 13632	100kΩ 1% 0603 0.62W
3790	4822 051 30272	2.7kΩ 5% 0.062W
3791	4822 051 30272	2.7kΩ 5% 0.062W
3792	4822 051 30103	10kΩ 5% 0.062W
3793	4822 051 30103	10kΩ 5% 0.062W
3798	4822 051 30153	15kΩ 5% 0.062W
3999	4822 051 30101	100Ω 5% 0.062W
9701	3198 036 90010	Wire 0.58mm
9702	3198 036 90010	Wire 0.58mm
9703	3198 036 90010	Wire 0.58mm
9706	3198 036 90010	Wire 0.58mm
9707	3198 036 90010	Wire 0.58mm
9708	3198 036 90010	Wire 0.58mm
9709	3198 036 90010	Wire 0.58mm
9712	3198 036 90010	Wire 0.58mm
9717	4822 051 30008	Jumper 0603

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5701	2422 536 00385	68µH 10%
5702	2422 536 00385	68µH 10%
5703	4822 157 11716	Bead 30Ω at 100MHz
5707	4822 157 11411	Bead 100MHz
5708	4822 157 11411	Bead 100MHz
5711	4822 157 11411	Bead 100MHz
5712	4822 157 11411	Bead 100MHz

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6701	4822 130 11397	BAS316
6710	4822 130 11551	UDZS10B
6711	4822 130 11551	UDZS10B

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7700	9322 163 86682	TDA7490L
7701	3198 010 42310	BC847BW
7703	3198 010 42310	BC847BW
7704	3198 010 42310	BC847BW
7705	3198 010 42310	BC847BW
7706	3198 010 42320	BC857BW
7707	3198 010 42310	BC847BW
7710	3198 010 42310	BC847BW
7711	3198 010 42310	BC847BW
7712	3198 010 42310	BC847BW
7713	3198 010 42310	BC847BW

Side I/O Panel [D]

Various

0206	3104 308 12561	Side I/O bracket
1001	2422 026 05133	Connector SVHS 4p f
1002	4822 267 10975	Connector 3p
1010	4822 267 31014	Socket head phone
1016	3104 328 28881	Side I/O assy
1M36	2422 025 17179	Connector 11p m

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2003	2022 552 05679	1µF 10% 16V 0805
2004	3198 016 36810	680pF 25V 0603
2005	2020 552 94427	100pF 5% 50V
2006	3198 016 36810	680pF 25V 0603
2007	2020 552 94427	100pF 5% 50V
2008	2238 916 15641	22nF 10% 25V 0603
2009	5322 126 11583	10nF 10% 50V 0603
2010	2238 916 15641	22nF 10% 25V 0603
2011	5322 126 11583	10nF 10% 50V 0603

-WW-

3000	4822 051 30759	75Ω 5% 0.062W
3004	4822 051 30759	75Ω 5% 0.062W
3008	4822 051 30222	2.2kΩ 5% 0.062W
3009	4822 051 30102	1kΩ 5% 0.062W
3010	4822 051 30333	33kΩ 5% 0.062W
3011	4822 051 30392	3.9Ω 5% 0.063W 0603
3012	4822 051 30102	1kΩ 5% 0.062W
3013	4822 051 30333	33kΩ 5% 0.062W
3016	4822 051 30103	10kΩ 5% 0.062W
3020	4822 051 30103	10kΩ 5% 0.062W
9004	4822 051 30008	Jumper 0603
9005	4822 051 30008	Jumper 0603
9006	4822 051 30008	Jumper 0603
9007	4822 051 30008	Jumper 0603
9008	4822 051 30008	Jumper 0603
9009	4822 051 30008	Jumper 0603
9010	4822 051 30008	Jumper 0603
9011	4822 051 30008	Jumper 0603

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6000	4822 130 11416	PDZ6.8B
6001	4822 130 11416	PDZ6.8B
6002	4822 130 11416	PDZ6.8B
6003	4822 130 11416	PDZ6.8B
6004	4822 130 11416	PDZ6.8B
6005	4822 130 11416	PDZ6.8B
6006	4822 130 11416	PDZ6.8B
6007	4822 130 11416	PDZ6.8B
6008	4822 130 11416	PDZ6.8B
6009	4822 130 11416	PDZ6.8B
6010	4822 130 11416	PDZ6.8B
6011	4822 130 11416	PDZ6.8B

Top Control Assy [E]

Various

0049	3104 308 11601	Mains knob
0054	3104 308 11591	Mains knob frame
0345	2422 025 16544	Connector 6p m
1701	4822 276 13775	Switch
1702	4822 276 13775	Switch
1703	4822 276 13775	Switch
1704	4822 276 13775	Switch
1705	4822 276 13775	Switch
1710	4822 276 14007	Switch 2P 0.1A 12V
8345	3104 311 06941	Cable 6P/680/6P

-WW-

3008	4822 117 10845	620Ω 1% 0.1W
3010	4822 117 11534	1.1kΩ 1% 0.1W
3011	4822 117 11951	2kΩ 1% 0.1W
3013	4822 117 13528	200Ω 1% 0.125W 0805
3014	3198 031 03910	390Ω 1% 0402
3017	4822 051 30339	33Ω 5% 0.062W
3018	4822 051 30339	33Ω 5% 0.062W
3019	4822 051 30339	33Ω 5% 0.062W
3020	4822 051 30339	33Ω 5% 0.062W
3021	4822 051 30339	33Ω 5% 0.062W
3022	4822 051 30339	33Ω 5% 0.062W
3023	4822 051 30339	33Ω 5% 0.062W
3024	4822 051 30339	33Ω 5% 0.062W
3025	4822 051 30339	33Ω 5% 0.062W
3026	4822 051 30339	33Ω 5% 0.062W
3027	4822 051 30339	33Ω 5% 0.062W
3028	4822 051 30339	33Ω 5% 0.062W
3999	4822 117 13602	2.2kΩ 5% 0.01W 0402
9000	4822 117 13605	Jumper 0402

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6001	9322 198 19685	SML512BC2T
6002	9322 198 19685	SML512BC2T
6003	9322 198 19685	SML512BC2T
6004	9322 198 19685	SML512BC2T
6005	9322 198 19685	SML512BC2T
6006	9322 198 19685	SML512BC2T
6007	9322 198 19685	SML512BC2T
6008	9322 198 19685	SML512BC2T
6009	9322 198 19685	SML512BC2T
6010	9322 198 19685	SML512BC2T
6011	9322 198 19685	SML512BC2T
6012	9322 198 19685	SML512BC2T

SCART 3 [H]

Various

1003	2422 025 14911	Socket Euro 21p f
1M07	4822 267 10637	Connector 5p

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2500	2022 552 05679	1µF 10% 16V 0805
2501	2020 552 94427	100pF 5% 50V
2502	2022 552 05679	1µF 10% 16V 0805
2503	2020 552 94427	100pF 5% 50V
2504	2022 552 05679	1µF 10% 16V 0805
2505	2022 552 05679	1µF 10% 16V 0805
2506	2238 586 59812	100nF 20% 50V 0603
2507	5322 126 11578	1nF 10% 50V 0603
2508	2022 552 05679	1µF 10% 16V 0805
2509	2238 586 59812	100nF 20% 50V 0603
2510	4822 126 14241	330pF 0603 50V
2511	2238 586 59812	100nF 20% 50V 0603
2512	2238 586 59812	100nF 20% 50V 0603
2513	2238 586 59812	100nF 20% 50V 0603
2515	2022 552 05679	1µF 10% 16V 0805
2516	2022 552 05679	1µF 10% 16V 0805
2517	2022 552 05679	1µF 10% 16V 0805

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3500	4822 051 30101	100Ω 5% 0.062W
3501	4822 051 30101	100Ω 5% 0.062W
3502	4822 051 30223	22kΩ 5% 0.062W
3503	4822 051 30101	100Ω 5% 0.062W
3504	4822 051 30101	100Ω 5% 0.062W
3505	4822 051 30223	22kΩ 5% 0.062W
3506	4822 051 30759	75Ω 5% 0.062W
3507	4822 051 30759	75Ω 5% 0.062W
3508	4822 051 30759	75Ω 5% 0.062W
3509	4822 051 30101	100Ω 5% 0.062W
3510	4822 051 30759	75Ω 5% 0.062W
3511	4822 051 30479	47Ω 5% 0.062W
3512	4822 051 30479	47Ω 5% 0.062W
3513	4822 051 30479	47Ω 5% 0.062W
3514	4822 051 30479	47Ω 5% 0.062W
3515	4822 051 30479	47Ω 5% 0.062W
3516	4822 051 30479	47Ω 5% 0.062W
3517	4822 117 12925	47kΩ 1% 0.063W 0603
3522	4822 051 30272	2.7kΩ 5% 0.062W
3523	4822 051 30223	22kΩ 5% 0.062W
3524	4822 051 30479	47Ω 5% 0.062W
3525	4822 051 30102	1kΩ 5% 0.062W
3526	5322 117 13056	8.2kΩ 1% 0.063W 0603
3527	4822 051 30683	68kΩ 5% 0.062W
3528	4822 051 30223	22kΩ 5% 0.062W
3529	4822 051 30102	1kΩ 5% 0.062W
3535	4822 051 30479	47Ω 5% 0.062W
3536	4822 051 30103	10kΩ 5% 0.062W
3543	4822 051 30759	75Ω 5% 0.062W
3599	4822 051 30102	1kΩ 5% 0.062W
3999	4822 051 30102	1kΩ 5% 0.062W
9502	4822 051 30008	Jumper 0603
9508	4822 051 30008	Jumper 0603
9509	3198 036 90010	Wire 0.58mm
9510	3198 036 90010	Wire 0.58mm
9511	3198 036 90010	Wire 0.58mm
9512	3198 036 90010	Wire 0.58mm
9513	3198 036 90010	Wire 0.58mm
9514	3198 036 90010	Wire 0.58mm
9515	3198 036 90010	Wire 0.58mm
9521	4822 051 30008	Jumper 0603
9523	3198 036 90010	Wire 0.58mm
9524	4822 051 30008	Jumper 0603
9525	3198 036 90010	Wire 0.58mm
9526	3198 036 90010	Wire 0.58mm

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6500	4822 130 11416	PDZ6.8B
6501	4822 130 11416	PDZ6.8B
6502	4822 130 11416	PDZ6.8B
6503	4822 130 11416	PDZ6.8B
6504	4822 130 11397	BAS316
6505	4822 130 11416	PDZ6.8B
6506	4822 130 11416	PDZ6.8B
6507	9340 548 61115	PDZ12B
6508	4822 130 11551	UDZS10B

7501	3198 010 42310	BC847BW
7502	3198 010 42310	BC847BW
7515	9351 869 40118	74HC4053PW
7516	9351 869 40118	74HC4053PW

LED + Switch Panel [J]

Various

0345	2422 025 16961	Connector 6p m SMD
1040	9322 206 81667	TSOP34836YA1
1M01	2422 025 17103	Connector 3p m SMD
1M20	2422 025 17441	Connector 12p m

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2030	4822 124 23002	10µF 16V
2040	4822 124 12095	100µF 20% 16V
2060	5322 124 41945	22µF 20% 35V
2070	4822 126 14583	470nF 10% 16V 0805
2071	4822 124 23002	10µF 16V

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3030	3198 031 04720	4.7kΩ 5% 0402
3031	4822 117 12889	270kΩ 1% 0.063W 0603
3032	2322 705 70184	180Ω 5% 0402
3033	4822 051 30102	1kΩ 5% 0.062W
3034	4822 117 13548	1kΩ 5% 0402
3035	3198 031 04720	4.7kΩ 5% 0402
3036	3198 031 02280	2.2Ω 5% 0.1W 0402
3037	3198 031 02280	2.2Ω 5% 0.1W 0402
3040	4822 117 13597	330Ω 5% 0402 0.01W
3041	4822 117 13606	10kΩ 5% 0.01W 0402
3042	3198 031 06820	6.8kΩ 5% 0.01W 0402
3051	4822 117 13597	330Ω 5% 0402 0.01W
3060	4822 117 13606	10kΩ 5% 0.01W 0402
3061	4822 051 30331	330Ω 5% 0.062W
3062	4822 117 11373	100Ω 1% 0805
3063	4822 117 13606	10kΩ 5% 0.01W 0402
3064	4822 117 11373	100Ω 1% 0805
3070	2322 705 70475	4.7MΩ 5% 0402
3071	2322 705 70475	4.7MΩ 5% 0402
3072	4822 117 13548	1kΩ 5% 0402
3073	3198 031 03320	3.3kΩ 5% 0402
3074	4822 117 13606	10kΩ 5% 0.01W 0402
3075	3198 031 04720	4.7kΩ 5% 0402
3078	3198 031 03320	3.3kΩ 5% 0402
3079	3198 031 03320	3.3kΩ 5% 0402
9010	4822 117 13605	Jumper 0402
9013	4822 117 13605	Jumper 0402
9019	4822 117 13605	Jumper 0402
9022	4822 051 30008	Jumper 0603
9024	4822 051 30008	Jumper 0603
9026	4822 117 13605	Jumper 0402
9027	4822 117 13605	Jumper 0402
9040	4822 117 13605	Jumper 0402
9043	4822 117 13605	Jumper 0402

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6030	4822 130 11397	BAS316
6031	4822 130 11397	BAS316
6051	4822 130 83915	TLMV3100
6060	9322 198 19685	SML512BC2T
6061	4822 130 11397	BAS316
6070	9322 140 63685	TEMD5000

7030	3198 010 42320	BC857BW
7031	5322 130 62804	BCP53
7032	3198 010 42310	BC847BW
7060	3198 010 42310	BC847BW
7061	3198 010 42310	BC847BW
7070	9322 192 63668	LM358P

11. Revision List

Manual xxxx xxx xxxx.0

- First release.

Manual xxxx xxx xxxx.1

General: Small textual and graphical improvements.

- Ch. 2: Lead-free text updated.
- Ch. 5: Two missing “Stepwise Start-up” flow charts added.
- Ch. 6:
  - Wiring diagrams updated with overview of AmbiLight connectors.
  - Block diagram Power Supply 42” FHP corrected.
  - Other block diagrams updated.
- Ch. 7:
  - 12nc’s of diagrams B14 corrected.
  - Copper tracks of SSB layout added.
- Ch. 8: Explanation overview of Option Bits added.
- Ch. 9: IC Data sheets added.